Teacher Reciprocal Learning in International Professional Communities Between Ontario and Shanghai Schools

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Education

Educational Leadership and Policy

The department of Leadership, Higher and Adult Education (LHAE)

OISE

University of Toronto

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The work reported herein is supported by the Social Sciences and Humanities Research Council of Canada Partnership Grant Project titled Reciprocal Learning in Teacher Education and School Education between Canada and China, directed by Michael Connelly and Shijing Xu, with the University of Windsor as the lead institution. It is part of Connelly and Xu's (2013) longitudinal SSHRC Partnership Grant research project.

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Abstract

This study investigates teachers’ cross-cultural professional learning in an emerging Canada-China school network that involved Ontario and Shanghai educators. Drawing on the literature of teacher learning in professional learning communities (PLCs), particularly networked PLCs, this study sheds light on teacher learning and its supportive conditions in the international setting. The educators who participated were interviewed while observational data about their cross-cultural collaboration were collected over a period of two years. This exploratory comparative study concluded with a tentative model for teacher reciprocal learning in internationally networked PLCs (INPLCs) in light of empirical data in order to stimulate future research and practice.
The data shows that thematic activities and videoconferences helped teachers collaborate and learn in these INPLCs. The teachers mutually benefited from these interactions although they also encountered some setbacks associated with the international exchange. The data validates that these teachers’ learning experiences impacted their knowledge, practice, professional identity, and motivation to participate. This study also identifies six within-school and six within-network supportive organizational conditions. Based on these findings and the knowledge from the literature, suggestions are made to further develop the nascent Canada-China school network in a hope of bringing about more teacher learning.

This study joins the research on international school partnerships or networks that are possibly conducive to student growth, teacher learning, and school development. Overall, this exploration reveals that given right organizational conditions it is possible to create an effective reciprocal learning space involving school educators from two places that differ educationally, culturally, and historically. Meanwhile, this study shows the potential of one comparative education that features participants’ direct interaction. With the evidence of in-service teachers’ cross-cultural professional learning in the context of Ontario and Shanghai education, it demonstrates a way of research that investigates and compares participants’ interactions and reciprocal learning in the international setting.
Acknowledgments

Over the past four years, many professors, colleagues, and friends at OISE of the University of Toronto and beyond provided me with tremendous support and care. I would like to take this space to express my sincere gratitude and acknowledgments to them. Without them, I could not even imagine I would have fulfilled this project.

First of all, I owe my deepest gratitude to Dr. Stephen Anderson. As both my Faculty Advisor and Academic Supervisor, Steve always made himself available to me and gave me good advice. It is he who helped me focus my research interest, stay on the course, and navigate through the whole process successfully. He provided me with many insightful suggestions as I developed my research ideas, collected and analyzed data, and finally completed the thesis.

Second, I want to express my warmest gratitude to other members in my thesis committee, including Dr. Ruth Hayhoe and Dr. Carol Campbell. Their encouragement and invaluable feedback since the beginning of this project ensured its quality and completion. Especially, I deeply appreciate Ruth’s enormous support for both this doctoral study and my related work on the Reciprocal Learning project. I also feel grateful to my external examiners, Dr. Lynn Paine and Dr. Mary Kooy, for their strong interest and kind willingness to read my thesis and provide comments. Besides, the student members of Ruth’s Thesis Group provided me with many helpful comments and suggestions when I shared my study at Thesis Group meetings.

Third, this dissertation is part of the SSHRC funded Reciprocal Learning partnership project. Over the past three years, I was grateful for the fact that I was supported by Dr. Michael Connelly and Dr. Shijing Xu, the two directors of the partnership project, to conduct my study in the project. Meanwhile, I collaborated with a group of research assistants who worked on the
project in both Toronto and Shanghai. Particularly, among these research assistants, I owe deep gratitude to my colleague and friend Yishin Khoo who shared much of her experience and resources to support my study. I also want to say many thanks to Dr. Julia Pan who used to be my colleague in the Reciprocal Learning project and later became my mentor and good friend as I went through my study at OISE. Julia was also the first reader of my thesis and provided me with many helpful comments.

Four, this study was also supported by the Mitacs Globlink Research Award and the Ruth Hayhoe Xu Mei De Scholarship. These financial supports made me able to concentrate on my fieldwork, data analysis, and the final writing up. In addition, I deeply appreciated the collaboration with all my research participants in Canada and China. The consistent commitment of these teachers and principals to the Reciprocal Learning project and my research made this study possible.

Last but not least, I owe greatest gratitude to my family. Their endless love, care, sacrifice, and support is always the source of my strong motivation to succeed. My wife Liping temporarily quit her job and came to Canada to support my study when I needed her the most. My son Jiayu’s company over the past few years is a great source of joy and balance outside the challenging and sometimes isolated academic pursuit. For my parents, what I do now might be beyond their imagination since they did not even finish high school due to the Chinese Cultural Revolution. However, they wholeheartedly support whatever I am pursuing while pining for more chances to see their elder son.
Table of Contents

Abstract II
Acknowledgments IV
List of Acronyms XI
List of Tables and Figures XII
List of Appendices XIII

Chapter 1 Introduction 1
  Background 1
  Setting of the study 2
  Purpose of the study 4
  Research questions 4
  Significance of the study 5
  The researcher 6

Chapter 2 Literature Review 9
  Teacher learning in professional learning community (PLC) 9
  Networked professional learning community (PLC) 12
  Effects of teacher learning in networked PLCs 13
  Organizational conditions for building and sustaining networked PLCs 15
  Research relevant to internationally networked PLCs (INPLCs) 17
  Summary 20

Chapter 3 Context 23
  Shanghai, past, present, and its school education 24
    Geographic facts 24
    History and development 25
<table>
<thead>
<tr>
<th>People and culture</th>
<th>26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai school education</td>
<td>27</td>
</tr>
<tr>
<td>Shanghai curriculum reforms</td>
<td>29</td>
</tr>
<tr>
<td>Shanghai teacher development</td>
<td>31</td>
</tr>
<tr>
<td>Internationalization of Shanghai school education</td>
<td>33</td>
</tr>
</tbody>
</table>

**Ontario, past, present, and its school education**

<table>
<thead>
<tr>
<th>Geographic facts</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>History and development</td>
<td>35</td>
</tr>
<tr>
<td>People and culture</td>
<td>37</td>
</tr>
<tr>
<td>Ontario school education</td>
<td>38</td>
</tr>
<tr>
<td>Ontario curriculum reforms</td>
<td>39</td>
</tr>
<tr>
<td>Ontario teacher development</td>
<td>40</td>
</tr>
<tr>
<td>Internationalization of Ontario school education</td>
<td>42</td>
</tr>
</tbody>
</table>

**Summary**

**Chapter 4 Conceptual Framework**

<table>
<thead>
<tr>
<th>Creating a reciprocal learning space</th>
<th>47</th>
</tr>
</thead>
<tbody>
<tr>
<td>A framework for teacher reciprocal learning research</td>
<td>51</td>
</tr>
<tr>
<td>Teacher motivation</td>
<td>54</td>
</tr>
<tr>
<td>Teacher knowledge</td>
<td>56</td>
</tr>
<tr>
<td>Cosmopolitan teacher professional identity</td>
<td>59</td>
</tr>
</tbody>
</table>

**Summary**

**Chapter 5 Research Method**

<table>
<thead>
<tr>
<th>An exploratory comparative study in reciprocal learning space</th>
<th>63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>65</td>
</tr>
<tr>
<td>Data collection</td>
<td>67</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Potential pedagogical shift and student growth</td>
<td>129</td>
</tr>
<tr>
<td><strong>Cosmopolitan teacher professional identity</strong></td>
<td>133</td>
</tr>
<tr>
<td>Evidence of cosmopolitan awareness</td>
<td>133</td>
</tr>
<tr>
<td>Reshaping teacher professional identity</td>
<td>137</td>
</tr>
<tr>
<td><strong>Summary</strong></td>
<td>140</td>
</tr>
<tr>
<td><strong>Chapter 8 Organizational Conditions for building and sustaining INPLCs</strong></td>
<td>142</td>
</tr>
<tr>
<td><strong>Within school organizational conditions</strong></td>
<td>142</td>
</tr>
<tr>
<td>Principals’ support</td>
<td>142</td>
</tr>
<tr>
<td>On-site coordination in Shanghai schools</td>
<td>149</td>
</tr>
<tr>
<td>Local educational authority’s involvement</td>
<td>152</td>
</tr>
<tr>
<td>Student and parent support</td>
<td>154</td>
</tr>
<tr>
<td>Limited time</td>
<td>155</td>
</tr>
<tr>
<td>Sustainable commitment</td>
<td>157</td>
</tr>
<tr>
<td><strong>Within network organizational conditions</strong></td>
<td>160</td>
</tr>
<tr>
<td>Pre-existing conditions</td>
<td>160</td>
</tr>
<tr>
<td>Negotiating for a long term goal for school partnerships</td>
<td>162</td>
</tr>
<tr>
<td>Handling culture and system differences</td>
<td>165</td>
</tr>
<tr>
<td>Difficulties in communication</td>
<td>172</td>
</tr>
<tr>
<td>Needing in-person exchanges</td>
<td>177</td>
</tr>
<tr>
<td>Importance of facilitators</td>
<td>179</td>
</tr>
<tr>
<td><strong>Summary</strong></td>
<td>181</td>
</tr>
<tr>
<td><strong>Chapter 9 Discussion, conclusion, and implications</strong></td>
<td>183</td>
</tr>
<tr>
<td>A summary of main research findings</td>
<td>183</td>
</tr>
<tr>
<td>Comparative findings—focusing on differences</td>
<td>186</td>
</tr>
<tr>
<td><strong>A verification of teacher reciprocal learning in INPLCs</strong></td>
<td>189</td>
</tr>
</tbody>
</table>
## List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>Basic Curriculum (Shanghai)</td>
</tr>
<tr>
<td>CP</td>
<td>Chinese Principal (Shanghai)</td>
</tr>
<tr>
<td>CT</td>
<td>Chinese Teacher (Shanghai)</td>
</tr>
<tr>
<td>CVP</td>
<td>Chinese Vice Principal (Shanghai)</td>
</tr>
<tr>
<td>EB</td>
<td>Education Bureau (Shanghai)</td>
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<tr>
<td>EC</td>
<td>Extended Curriculum (Shanghai)</td>
</tr>
<tr>
<td>ECNU</td>
<td>East China Normal University</td>
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<tr>
<td>EP</td>
<td>Canadian Principal (Ontario)</td>
</tr>
<tr>
<td>EQAO</td>
<td>Education Quality and Accountability Office (Ontario)</td>
</tr>
<tr>
<td>ET</td>
<td>Canadian Teacher (Ontario)</td>
</tr>
<tr>
<td>IC</td>
<td>Inquiry Curriculum (Shanghai)</td>
</tr>
<tr>
<td>INPLC</td>
<td>Internationally Networked Professional Learning Community</td>
</tr>
<tr>
<td>MEC</td>
<td>Municipal Education Commission (Shanghai)</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education (Ontario)</td>
</tr>
<tr>
<td>NPLC</td>
<td>Networked Professional Learning Community</td>
</tr>
<tr>
<td>PLC</td>
<td>Professional Learning Community</td>
</tr>
<tr>
<td>PPK</td>
<td>Personal Practical Knowledge</td>
</tr>
<tr>
<td>RA</td>
<td>Research Assistant</td>
</tr>
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<td>RL</td>
<td>Reciprocal Learning</td>
</tr>
<tr>
<td>SB</td>
<td>School Board (Ontario)</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UT</td>
<td>The University of Toronto</td>
</tr>
<tr>
<td>UW</td>
<td>The University of Windsor</td>
</tr>
</tbody>
</table>
List of Tables and Figures

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Thematic activities between sister schools</td>
<td>80</td>
</tr>
<tr>
<td>Table 2</td>
<td>Teachers’ perceived knowledge gaining and offering</td>
<td>94</td>
</tr>
<tr>
<td>Figure 1</td>
<td>Conceptual framework of the study</td>
<td>47</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Data sources and research questions</td>
<td>70</td>
</tr>
<tr>
<td>Figure 3</td>
<td>A tentative model of teacher reciprocal learning</td>
<td>210</td>
</tr>
</tbody>
</table>
List of Appendices

Appendix A Participants’ attributes 236
Appendix B Starting dates of sister school pairs 239
Appendix C Interview guideline for teachers 240
Appendix D Interview guideline for principals 243
Appendix E Initial code list 246
Appendix F Final codes and definitions 248
Appendix G Teacher analysis table 254
Appendix H Consent form for interviews 260
Appendix I Videoconferences for Chapter 6 266
Appendix J Main themes for Chapter 7 270
Appendix K Motivation change of teachers for Chapter 7 271
Appendix L Organizational conditions for Chapter 8 272
Chapter 1

Introduction

Background

Today, the world is characterized by economic and cultural globalization, advanced digital technology, and the convenience of international travel, conditions that enable the global flow of policies and practices that can transform people’s social lives. While policy makers are borrowing and lending educational policies globally (Lingard & Rawolle, 2011; Steiner-Khamsi, 2004), at the micro level the characteristics of teaching and learning are also changing and teachers face new needs for learning and development (Devlin-Foltz, 2010; Luke, 2004; Smith, 2002). Although globalization might have a negative impact on education (See Hargreaves, A., 2003), it is a shift within the larger historical trajectory of human development (Held & McGrew, 2003) and already means education is no longer an entity confined within the sociocultural and political situations of separate nation states (examples see Tarc, 2012; Steiner-Khamsi, 2012; Moutsios, 2012; Lingard & Rawolle, 2011; Kenway & Bullen, 2005; Steiner-Khamsi, 2004). Indeed, in education the idea of learning across borders at either policy level or practice level has been discussed in the comparative education literature for a long time (e.g. Hayhoe, 2008; Biggs & Watkins, 2001; Stevenson & Stigler 1992; King, 1973). Thoughts and practices in other education systems and cultures can be useful learning sources for teachers to renew their thinking, knowledge, and skills; and teachers need new information to stimulate reflection on their current practices and belief systems in order to improve teaching and student learning (Timperley, Wilson, Barrar, & Fung, 2007). Thus, against the backdrop of globalization and the associated changing educational landscape, there is no reason to confine the practice and research of teacher professional learning within the boundaries of nation states.

The province of Ontario in Canada and the city of Shanghai in China, one in the western developed world, the other in the eastern developing world, provide the context for this study. Presumably, their education differs in many aspects such as social norms (Nisbett, 2004), epistemological assumptions (Hayhoe, 2014), political environments, and cultural traditions. Nevertheless, Ontario and Shanghai education are both recognized as “successful reformers”
OECD, 2011), and both endeavor to become future world leaders in terms of education (Fullan, 2013; Shanghai MEC, 2010). Given these disparities and commonalities, there is potential for educators in the two education systems to learn from each other about policies and practices. For Chinese and Canadian educators, who are the participants of this study, both history and the current trend of education in the world suggest that there is need for them to learn from each other. Canadian educators have become more interested in Chinese education recently as international tests demonstrate its high student achievement (e.g. Anderssen, 2014) and as the Chinese speaking population in Canada increases (Statistics Canada, 2011), whereas Chinese educators have been learning and practicing ways of combining western pedagogical ideas with Chinese educational traditions and values for over a hundred years (Deng, 2011; Hayhoe, 2008). Given the influence of globalization on education and research and the potential for mutual learning between Ontario and Shanghai educators, the study will probe into a relatively new phenomenon of cross-national, cross-cultural teacher professional learning taking place in the environment of a partnership initiative between Canada and China.

Setting of the study

This study is contextualized in a large SSHRC-funded partnership research project entitled Reciprocal Learning in teacher education and school education between Canada and China (RL project) (Connelly & Xu, 2013-2020). The underpinning idea of the RL project—bridging Western and Eastern education—has been developed and practiced through multiple research and developmental initiatives in the past by the two principal investigators (Connelly & Xu, 2009; Xu, 2008; Xu & Connelly, 2008). It has been shown or argued that reciprocal learning between Chinese and Canadian educators in terms of educational values (Xu, 2011; Xu, 2006) and teacher education (Howe & Xu, 2013; Connelly, 2013) is possible and promising. One main goal of the current RL partnership project is to build cross-cultural knowledge and understanding among educational stakeholders in the two countries in order to bring about social and educational benefits within the global environment. To this end, the RL project promotes and hence investigates collaborations in the areas of teacher education and school education between Canada and China. The partners of the RL project include two Canadian universities, two Canadian school boards, four Chinese universities including the East China Normal University
(ECNU) in Shanghai, and many Chinese schools. The leading institute of the RL project is the University of Windsor (UW). The other Canadian university is the University of Toronto (UT), where I am studying as a doctoral student and working as a Research Assistant (RA) on the RL project. I have been working on the project, alongside other RAs, since it began in 2013.

There are two main elements in the RL project. One is a student teacher exchange program that is jointly operated by the UW and one Chinese partner university. The second element is to initiate and expand a Canada-China sister school network during the period of time between 2013 and 2020. The purpose of building the cross-national school network is to foster educators’ mutual understanding and learning in order to nurture better professional learning and student learning. At the early stage of the RL project, schools from Shanghai and Ontario started building partnerships first; later, the network expanded and continues to expand to other cities where the partner universities are located. With the support from the ECNU and the UT, four public funded schools in Shanghai were connected with four public schools in Ontario to form four school partnerships. Among them, two pairs are elementary school partnerships while the other two are secondary school pairs. Once an intention of partnering between two schools was confirmed, RAs from the two universities would arrange and facilitate initial conversations between the schools. The principals, as well as vice principals in some cases, would first met through videoconferences to exchange basic information about their schools and discuss possible directions about the school partnership. Subsequently, some interested teachers on each side would be introduced to each other by their principals; then the focus of the partnership would shift to teacher-initiated exchanges and collaborations between the schools or classrooms provided with RAs’ ongoing facilitation and interpretation. For research purposes, this emerging school network and associated educators’ communities provide “laboratories” where researchers can investigate how knowledge and understanding in terms of education are shared and built between participants from the two countries and cultures. Specifically, by this study, I intend to probe into the processes, content, effects, and organizational conditions of educators’ cross-cultural, cross-system reciprocal learning in the context of globalization.
Purpose of the study

Situated in the larger RL project, this study seeks to investigate the teacher-related professional learning of Canadian and Chinese educators in international teacher communities and the organizational conditions for building and sustaining these international professional communities. Firstly, I want to understand what professional knowledge is being shared and created and what kind of “global competence” is being developed (Devlin-Foltz, 2010) when teachers are involved in cross-cultural settings. Also, I want to investigate the learning activities in international teacher communities and examine how these activities enhance knowledge sharing and improvement in practice in the nascent school network between Canada and China. Moreover, I want to find evidence, if any, for the impact of this kind of cross-boundary professional learning on teachers. Secondly, the study seeks to understand factors that support teachers’ reciprocal learning and the organizational conditions for building these school partnerships and international teacher communities. Building on the knowledge about creating and sustaining school-based and networked professional learning communities that are conducive to teacher learning (e.g. Veugelers, 2005; Morrissey, 2000), I will look into the early building processes of school partnerships between Ontario and Shanghai in order to identify contributing conditions in the special context. Thirdly, the study will provide comparative data and analysis about knowledge sharing, change in practice, and educators’ views on participation associated with those emerging international professional communities. Moreover, the comparative analysis will try to reveal to what extent the idea of reciprocity can be achieved through dialogue and collaboration between educators from the two different cultures and education systems.

Research questions

Overall, the study will answer the following question: what are the processes, content, and effects of teacher learning in emerging international professional communities between Chinese and Canadian schools and what organizational conditions can support and sustain teachers’ international professional learning? Four subsidiary questions help to answer the main research question:
1. What activities happened and what teacher knowledge has been shared and created in the nascent international professional learning communities (PLCs) between Ontario and Shanghai?

2. What are the impacts of the participation in international PLCs between Ontario and Shanghai on teachers’ knowledge, practice, motivation of professional learning, and professional identity?

3. What conditions in schools and in international communities facilitate the early development and practice of international teacher PLCs between Ontario and Shanghai?

4. How do these conditions influence the early development of international teacher PLCs, the learning in these teacher communities, and the prospects for a sustained partnership?

**Significance of the study**

Firstly, this study will investigate the early development of international teacher communities as a part of an emerging school network between China and Canada that evolves in the environment of the RL partnership project. The knowledge about creating and sustaining PLCs, particularly those in international settings, and associated difficulties in the developing process is limited in the literature (Stoll, Robertson, Butler-Kisber, Sklar, & Whittingham, 2007; Grossman, And, & Woolworth, 2001). Therefore, the study can fill the gap by providing evidence of the early development of internationally networked PLCs (INPLCs) in the context of Chinese and Canadian societies and schools. Secondly, this study investigates the practice and conditions of in-service teachers’ cross-cultural reciprocal learning, given that educators from the two countries are engaged in INPLCs. There have been calls for teachers’ global competence in order to prepare globally competent youth in this global age (e.g. West, 2012; Mansilla & Jackson, 2011; Devlin-Foltz, 2010; Goodwin, 2010; Longview Foundation, 2008), internationalizing teacher education (e.g. Langford, 2013) by involving teachers in intercultural experiences (e.g. Martin & Griffiths, 2012; Alfaro & Quezada, 2010; Cruickshank & Westbrook, 2013). However, research and practice in this area exclusively focus on pre-service teachers’ preparation and relevant studies have mainly been conducted from the perspective of developed western countries particularly the United States of America. This study explores a relatively new phenomenon of in-service teachers’ cross-cultural professional learning and tries to answer how and what teachers can learn from each other in order for there to be mutual benefit for both...
teachers and students. Particularly, given the fact that PLC is promoted in schools by Ontario education policies (Ontario MOE, 2013a; 2013b; 2007a) and is an inherent element of Chinese education system (Sargent, 2015; Sargent & Hannum, 2009), this study seeks to provide evidence of how professional learning in international networks are connected to the current work in these participating schools in a way that brings about potential improvement.

Thirdly, the study will analyze data using a comparative lens given that educators participating in the study come from different countries and cultures. The comparative analysis will provide knowledge about differences and similarities of teachers’ learning experience in INPLCs contextualized in different sociocultural and institutional settings. This is a topic to which very few studies in the PLC literature have made a contribution (e.g. Hargreaves E. et al., 2013; Wong, 2010). Moreover, participants of the study from different cultural backgrounds are interacting with each other when they take part in the same project at the same time. This unique feature of the study provides an opportunity to investigate how educators from the two countries experience and perceive differently or similarly while engaging in the same interactive space despite personal, social, and cultural differences. Lastly, since this study documents the early development of a school network and internationally networked PLCs in the environment of the RL project, the results of the study can be applied and tested by later school network development in the same project. Since the goal of the creation of the China-Canada school network is to foster educators’ long-term reciprocal learning, this study contributes to the goal by providing knowledge for other school partnerships and the whole school network in the context of the RL project as well as other educational initiatives in international, intercultural settings.

The researcher

I grew up in China in the 1980s when the country started adopting a reform and opening-up policy to pursue modernization and began to eagerly learn from developed countries in terms of almost everything except for the political system. After a humble early childhood in a poor suburb of Shanghai, I then observed the tremendous economic growth of the city and the whole country during the past 30 years; at the same time, the living standard of my family, like all the other people in Shanghai, improved dramatically over the same period. Perhaps, to my understanding, the success of China to date can mostly attribute to the practice of “adopting
foreign things to serve China” (洋为中用), which is a very popular Chinese phrase. Due to this observation and my life experience, I personally identify with the need of learning from others in order to induce positive changes for the society. This belief could apply to other countries as well. Indeed, in recent years more and more people within China and around the world began to realize that China may contribute to the world and that other countries can learn from the country’s recent experience of development too. Certainly, as a Chinese, I am not only proud of what my country has achieved in the past decades but also hope its history, culture, and traditions can contribute to the course of human development.

I started my teaching career in a local middle school after I graduated from the Shanghai Normal University. As I taught, my interest in learning about western developed countries urged me to always pay attention to outside world and keep learning English. A few years later, I found a teaching position in a Chinese-English bilingual school, one of which were established to meet the Shanghai society’s burgeoning demand for an alternative westernized school education. When the school offered the first International Baccalaureate (IB) Diploma Programme to Chinese domestic students in Shanghai, I secured a position in the IB division that required me to teach mathematics in English. From then, my work and professional learning experience was fundamentally changed as I entered a new international environment where local Chinese teachers and foreign teachers work and learn together. I embraced the learning opportunity in the international setting and thrived as a professional so that I became the director of the IB division later and oversaw its teacher recruitment, development, and evaluation. Besides, as an administrator and teacher of the international school, I had many opportunities to visit schools overseas, to exchange ideas with IB colleagues around the world, and to host foreign visitors from many countries who were equally fascinated by our school and the Chinese culture. In retrospect, it is this work experience that consolidated my belief that educators from different countries and cultures can work together and can learn from each other in order to produce good educational results.

My experiences in the transforming Chinese society and in international schools in Shanghai can explain why I was so appealed by the idea of reciprocal learning and by the actions of creating a school network to facilitate mutual learning between Canada and China—one belongs to the western developed world and the other is my home country. Personally, I also see myself as a
professional dwelling in an in-between space, which connects my Chinese experience to professional and academic knowledge from the world. Therefore, naturally, I believe it will be beneficial to connect schools between the two countries and to provide teachers on both sides with this kind of cross-boundary professional learning opportunities. In addition, the idea of reciprocal learning also resonates with one traditional tenet of teaching that I believe—“When you teach others you teach yourself at the same time (教学相长)”. Therefore, as long as teachers on either side contribute to the cross-cultural collaboration they will learn at the same time. Interestingly, this belief also seems to echo social learning theories that postulate that people learn as they participate in social practices. Related to this particular exploratory study, my belief in reciprocal learning and enthusiasm for educators’ international exchange certainly influenced the way in which I present the findings. I opted to show potentials of the new international school network and the like in a hope of drawing more academic and practical interest to the course of cross-cultural reciprocal learning. At the same time, however, I was certainly aware of the importance of objectivity and strived to maintain objectivity for the study. In Chapter 5, I will talk about the procedures that I used in the study to challenge, triangulate, and hence improve the findings.
Chapter 2
Literature Review—Teacher learning in networked PLCs

This chapter reviews existing literature on teacher learning in professional learning communities (PLCs) and particularly on teacher learning in networked professional learning communities. This chapter begins with a discussion about the concept of PLC, the theoretical underpinnings of the concept, and the practice and research related to it. Subsequently, I review the research on networked PLCs in the educational literature in order to understand the connections between within-school PLCs and networked PLCs. Following this general discussion, I specifically focus on two themes about networked PLCs— the effects of teacher learning in networked PLCs and organizational conditions for building and sustaining networked PLCs. The last section of this literature review turns to the existing knowledge and experiences of internationally networked PLCs in education, which is directly related to this particularly study.

Teacher learning in professional learning community

The concept of professional learning community (PLC) originally refers to an approach to school reform that is characterized by “shared mission, vision and values; collective inquiry; collaborative teams; an orientation toward action and a willingness to experiment; commitment to continuous improvement; and a focus on results” (DuFour & Eaker, 1998, p. 45). In the past three decades, PLC as a means of school improvement through teacher learning and development has become a ubiquitous practice in all levels of many school systems. Given the prevalence of PLCs, DuFour (2004) stresses three core principles of PLCs, including ensuring students learn, building a collaborative school culture, and using student achievement as the measure of effectiveness. A review of more recent literature shows that PLCs can occur both within and outside schools; and therefore it can be broadly defined as an group of teachers, for the purpose of improving teaching and student learning, sharing and examining their practice and knowledge in an ongoing, organized, and collaborative way (Sargent & Hannum, 2009; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006; Toole & Louis, 2002; King & Newmann, 2001; Mitchell & Sackney, 2001). Despite different locations and various forms, in essence PLCs should be treated as a process (Cranston, 2009; Grossman et al., 2001) and a means to the end of school
improvement, student learning, and teacher growth (Darling-Hammond & Richardson, 2009; Grossman et al., 2001; Morrissey, 2000).

The prevalence of the PLC concept in school systems can be explained by its association with practical and scholarly efforts in school improvement that apply the idea of learning through social interactions. In the light of the understanding about issues of teacher work such as presentism, conservatism, individualism (Lortie, 1975), educational researchers attending to school effectiveness and improvement have been persistently taking on these obstacles in order to bring about education change and suggest teacher collaboration and collective learning as a means to this end, be it within schools (Morrissey, 2000; Louis & Marks, 1998; Hord, 1997; Louis, Marks, & Kruse, 1996; McLaughlin & Talbert, 1993; Little, 1990) or in cross-school networks (Little, 2005; Lieberman & Wood, 2003; Huberman, 1995). In the United States of America (USA), for example, McLaughlin and Talbert (1993) conclude that PLCs provide the most effective context for teachers to discuss the nation’s education goals in terms of classroom teaching and students learning. Within those PLCs, be it a subject department, the whole school, a professional organization, or a network, teachers can be engaged in sustained learning, reflecting, experimenting, and change. Outside the USA, in countries such as China, both the practice of and research on PLCs are common too (e.g. Wong, 2010; Sargent & Hannum, 2009) and unsurprisingly, PLCs in other countries can also be found within schools (Cranston, 2009; Lee, Zhang, & Yin, 2011; McNicholl, Childs, & Burn, 2013) or in cross-school settings (Hargreaves E. et al., 2013; Moore & Kelly, 2009; Jackson & Temperley, 2007; Veugelers, 2005). Indeed, the PLC in education is an internationally shared concept and practice for educational improvement.

The theoretical underpinning of teacher learning in PLCs can be linked to the constructivist view of learning and social learning theories that emphasize learning through participation in practice in social settings (Jones, Gardner, Robertson, & Robert, 2013; Mireles, 2012; Wenger, 1998; Lave, 1996; Lave & Wenger, 1991). From the constructivist perspective, knowledge is understood as neither in the individual nor in the real world but a social construct; individuals construct their own meaning based on the external world; and knowing originates in social interactions and the social lives of members in communities (Phillips, 2000; Prawat, 1996b; Prawat, 1996a). This view of learning and knowing can be also linked to sociocultural theories.
and particularly to Lev Vygotsky’s theorization of learning. For Vygotsky (1978), learning starts from an interpersonal level and then continues at an intrapersonal level and “only by interacting with the material world and other humans” can people develop knowledge of reality (Wertsch, 1981, p. 11). Therefore, human cognition and learning is fundamentally social and cultural rather than a phenomenon of individuals (Kozulin, 2003). Lave and Wenger (1991) go even further in postulating that “learning, thinking, and knowing are relations among people in activity…arising from the socially and culturally structured world (p. 51)”.

Building on these earlier theories, Wenger (1998) continues to conceptualize learning as participation in communities of practice. According to Wenger, learning and knowing as social participation consists of four components: community, practice, meaning, and identity. Communities of practice are characterized by three interrelated dimensions: mutual engagement, a joint enterprise, and a shared repertoire. Members of professional communities share and learn practices through sharing artifacts of their work; meanwhile, they reify their learning and knowledge by creating new artificial or material cultural artifacts which enable participants to perform actions and further negotiate meaning. Moreover, learning in communities of practice is an intertwined process of negotiation of knowledge and negotiation of identity. According to Wenger, participation and practice in professional communities is a complex process that combines emotions, behaviors, relationships, as well as identity transformation of members. In summary, for this study, the implication of the theories underpinning PLC is that investigating learning in PLCs needs to attend to the characteristics of communities and the conditions conducive to these characteristics, the interactive practices and learning activities among community members, the process of knowledge sharing and creation, and identity transformation of community members.

Educational researchers who study teacher PLCs have confirmed and extended Wenger’s (1998) conceptualization of learning in communities of practice, which is not necessarily confined to the organizational boundaries of a school (e.g. Mak & Pun, 2015; Lieberman & Pointer Mace, 2008; McLaughlin & Talbert, 2006; Knight, 2002; Little, 2003; Little, 2002). Applying the constructivist view of knowledge and the communities of practice approach to teacher learning in PLCs, teacher knowledge can be seen as being constructed by teachers individually and collectively when they interact with colleagues in their workplaces or networks outside schools.
Inside PLCs, teachers describe classroom teaching practices and provide associated artifacts of teaching and learning as “substantive resources for the group’s joint work, conveying its dominant orientation toward teaching practice, and negotiating what it means to be a teacher in this group” (Little, 2003, p. 936; Little, 2002). Moreover, in the same process, teachers reify these representations of teaching practice individually and collectively in real contexts (Little, 2003).

There is certainly downside to teachers’ PLCs; and the presence of communities of practice does not always produce a positive effect on teachers and schools (Timperley et al., 2007; Wenger, 1998). For example, Little’s (1990) research on teacher communities reveals that focusing more on collaboration will not necessarily lead to more teacher learning and improvement. Instead, conditions associated with teachers’ work such as teaching in isolation, focusing on the short term, and resisting big changes are still possibly perpetuated by various forms of collegial involvement (Little, 1990). Moreover, designated PLCs may result in teacher resentment against collaborations (Hargreaves, A., 2010), and excessive local coherence in communities of practice can be harmful for learning new things (Wenger, 1998). However, these issues of some PLCs described in the literature do not seem to be too relevant to this proposed study mainly because the INPLCs in question in the study are not attached to any external policy or reform agenda as is the case with many other PLCs. Moreover, these INPLCs take place in a special international setting and it is voluntary-based both for the participating schools and educators. Given these special features and the understanding of PLC in general, this study focuses on the building conditions of these newly formed international teacher professional communities, teachers’ knowledge sharing and reflection, and the impact of professional learning as educators in both countries participate by collaboration.

Networked professional learning community

A networked learning community in school education can be defined as “groups of schools working together in intentional ways to enhance the quality of professional learning and to strengthen capacity for continuous improvement in the service of enhanced student learning” (Katz, Earl, & Jaafar, 2009, p. 9). Obviously, networked professional learning communities share the same goals as school based PLCs that aim for teacher and student learning and school
improvement. Actually, it can be argued that the networked PLC is an extension of school-based 
PLCs. Bolam, McMahon, Stoll, Thomas, and Wallace (2005) point out that openness, networks, 
and partnerships are important characteristics of an effective PLC and therefore argue that in 
order to develop, sustain, and extend school-based PLCs, schools need external support, 
networking and partnerships. Jackson and Temperly (2007) add that the norm of collaborative 
learning of PLC requires it to be open to external learning opportunities from networks. In short, 
PLCs, be it networked or school-based, share many common characteristics (Clausen, Aquino & 
Wideman, 2009; Bolam et al, 2005) and both assemble teachers’ knowledge and skills in order to 
promote learning and practice (Hargreaves, 2003, Toole & Louis, 2002).

The practice and research of school networks or teacher networks as forms of networked PLCs 
have appeared in the educational literature for about two decades. Early studies of school-based 
PLCs have pointed to the existence and importance of external networks as relevant to 
also proposes an alternative model of networked professional learning as another pole of teacher 
professional development that augments those school-based learning activities. Huberman’s 
(1995) networked PLC approach aims to facilitate teachers in sharing and learning 
improvisational knowledge in classroom teaching from each other. He posits that teacher-led 
cross-school networks with shared subject matter, grade level of teaching, or interests in terms of 
problem solving will work for the agenda of professional development that improves classroom 
instruction. Indeed, these scholars have drawn attention to the existence and potential of 
networked PLCs in education. Following the early research, as I shall review later in this chapter, 
some other national and international initiatives and associated research also contribute to the 
discussion in this regard although they are limited in number. Indeed, for today’s schools and 
educators, given the changed conditions of education in the context of globalization, it seems to 
be neither possible nor wise to operate alone without considering other schools and external 
resources in the wider education system and in the interconnected and more accessible world.

Effects of teacher learning in networked PLC

One unique property of networked PLCs, in addition to characteristics of school-based PLCs, is 
the great potential of sharing knowledge and innovation across systems and in an even larger
scope for the purpose of improving teacher practice and student learning (Katz & Earl, 2010; Katz et al, 2008; Earl, Katz, Elgie, Jaafar, & Foster, 2006; Bolam et al, 2005). Based on a study of a school network in the Netherlands, Veugelers and Zijlstra (1995) conclude that schools and teachers can learn from each other about practice as well as their understanding and implementation of educational policies. They also elaborate that schools can benefit from participating in networks in many ways, such as learning new organizational forms of education, new teaching and learning strategies, and even justifications of the new knowledge. Moreover, they maintain that school networks can foster informal leadership and educational innovations. Studies in England and North America also provide comparable evidence for the positive effects of networked PLCs on teacher learning and change and student achievement (e.g. Katz et al., 2009; Earl et al., 2006). Moreover, network involvement can foster the development of school-based PLCs (Earl et al., 2006; Katz et al., 2009) by linking school-based PLCs at different developmental levels and creating new PLCs at the network level that enhance knowledge sharing and creation (Katz et al., 2008). Particularly for teachers, Morris, Chrispeels and Burke (2003) provide evidence that networks not only increase participants' content and pedagogical knowledge but also enable them to learn in new ways. In short, the promise of networked PLCs is that they can help individual schools improve in a way that relies on “numerous sources of external capacity” (Day, Hadfield, & Kellow, 2002, p. 19) and that ultimately both individual schools and the education system will improve through teacher professional learning and sharing in networks.

However, it does not seem to be too easy to achieve and prove the promise of networked PLCs. Little (2005a) cautions that the effect of the participation in networks on school improvement and education reforms remains unclear, although research shows to some extent that school networks may improve teacher practice and school performance given accessible external resources. Chapman and Hadfield (2010) also reach a similar conclusion that networks do impact schools, teachers, and hence students through collaborative activities whereas the causality between these activities and the impact is hard to establish due to the complexity of networks. Mireles’s (2012) survey study on teachers’ experience in a networked PLC in the USA even indicates that identified learning activities in school networks do not correlate to the change of teaching practice, although the study suggests that innovative teachers do value collaboration and external expertise. Wideman, Owston, and Sinitskaya’s (2007) view seems to be more optimistic
on this issue and have greater foresight. They contend that minimal impact on teachers' practice is usual and acceptable because building a learning community that can transform practice takes time. In summary, it is fair to say that school networks and networked PLCs of teachers hold the potential to enhance teacher learning and practice and in turn improve school work and student learning; however, achieving and verifying this promising goal is not an easy task for schools and for researchers with an interest in this. To actualize these positive impacts on schools, teachers, and students needs time and supportive conditions.

Organizational conditions for building and sustaining networked PLCs

The literature that specifically addresses conditions for building and sustaining networked PLCs is scant. Only limited knowledge and evidence is available related to the formation and operation, especially the early development, of networked PLCs. Day, Hadfield, and Kellow (2002) maintain that networked PLCs should build a culture of mutual trust, focus on teacher capacity building and student achievement, provide free choice of interests of inquiry, and put teachers in the center of activities. Mak and Pun (2015) agree by saying that common focuses and a good learning culture help forge a community identity and develop communal responsibility for professional learning. Speaking of the development of cross-school PLCs, they add that individual educators’ commitment and support from school administration and school community are important conditions. Morris, Chrispeels, and Burke (2003) point out that the support from school administration is actually the key if teachers’ learning in networks is to be linked with school-based professional learning. In order for teachers’ professional learning and growth in networks to be realized, Katz and Earl (2010) summarize six enabling conditions, including purpose and focus, relationships, collaboration, enquiry, informal and formal leadership, and capacity building and support. In the same vein, Katz et al (2008) also note that relationship building and collaborative activities are just the beginning on the way of actualizing the function of school networks.

The literature on school-based PLCs can complement the understanding about how to develop school networks since PLCs, be it within schools or cross-schools, share many common features
(see Clausen et al, 2009; Jackson & Temperley, 2007; Bolam et al, 2005; Hargreaves, 2003; Toole & Louis, 2002; Lieberman & Grolnick, 1996). Bolam et al (2005) summarize four processes that enable the operation of school-based PLCs: providing a variety of professional learning opportunities and reflective processes; making a full use of human and social resources by providing supportive leadership and coordination; managing structural resources such as time and space for learning; and interacting with external resources and support including networks and partnerships. Their summary confirms other research findings related to contributing factors of school-based teacher communities (e.g. Printy, 2008; Morrissey, 2000; Louis et al, 1996; Rosenholtz, 1989). As another organizational factor, the role of community facilitators who not only can maintain a healthy learning culture in the communities (McLaughlin & Talbert, 2006) but also can determine the focus of teachers’ learning and actions (Morrissey, 2000) is highlighted too. In addition to these organizational conditions, social cultural factors are also important to the creation and operation of PLCs. These factors include individual teachers’ orientations to learning and change (Opfer & Pedder, 2011; Bolam et al, 2005), team culture and group dynamics (Opfer, Pedder, & Lavicza, 2011; Mitchell & Sackney, 2001; Grossman et al, 2001; Morrissey, 2000), school factors such as its history, size, grade levels, location, and student demographics (Bolam et al, 2005; Rosenholtz, 1989), and external factors such as regional professional learning infrastructure, policy influences, and local community (Bolam et al, 2005).

In summary, the review of both networked and school-based PLC literature suggests that the following conditions in schools and in networks be worthy to be considered when developing and operating school networks: formal and informal leadership; purposes of learning; sociocultural factors within and around participating schools; teachers’ characteristics and motivations; organizational features of communities; and a healthy learning culture within professional communities. In addition, the literature review also reveals that building and sustaining PLCs is not an easy task (Mak & Pun, 2015; Feger & Arruda, 2008; Stoll et al., 2006); and the process of developing a PLC “is often slow and fraught with conflicts, silences, and misunderstandings” (Darling-Hammond & Richardson, 2009, p. 50), requires sustainable commitment, and challenges the ways of thinking about teaching, learning, and educators’ roles (Mitchell & Sackney, 2001). Moreover, it seems that most studies on teacher communities investigate existing communities (Grossman et al., 2001) rather than the process of their creation.
although the existing knowledge provides some insights into how school-based and networked PLCs develop and operate. Therefore, there is certainly a pressing need for more studies on the processes, conditions, and difficulties in creating networked PLCs, particularly those in international settings.

Research relevant to internationally networked PLCs (INPLCs) in education

In the 21st century, with advanced communication technology and convenient international travel, it seems that internationally networked PLCs (INPLCs) for teachers are inevitable. Lieberman and Pointer Mace (2008) note that it is likely that teachers connect with colleagues around the world to exchange ideas and learn from each other for the purpose of improvement as they embrace the community approach to professional learning. Earlier, Hargreaves, D. (1998) has envisioned that professional knowledge creation and sharing will be extended to school networks and that this process can be enhanced by the new information and communication technology. However, most studies on networked PLCs still investigate school networks or teacher networks within certain national or provincial education systems, although it has been noted elsewhere, for instance in the business sector, that professionals in international cross-cultural professional communities can learn from each another (Wenger, McDermott, & Snyder, 2002). A few existing studies in education show that it is not only possible but also useful if PLCs are extended to embrace a larger international scope.

Stoll et al. (2007) examine the development and practice of international networks of school leaders and the impact of internationally networked learning. Three international networks were promoted by an English Local Authority (school district); school leaders from England, Australia, New Zealand, and Canada participated in international placements by visiting each other for learning purposes. The study shows that international leadership experience helps school leaders to be aware of global educational development and to be open-minded about how to improve teaching and learning. Moreover, the study provides evidence that school leaders’ learning experience not only deepens leaders’ individual learning and enhances the work of school-based PLCs but also spreads to influence the work at the school district level.
A few studies show that international school networks and associated networked teacher PLCs can benefit teaching and learning too. Drawing on the work of International Networks for Democratic Education (INDE) and other relevant research conducted in the Netherlands, Veugelers (2005) shows that teacher learning becomes horizontal and mutual in international networks and that these networks help teachers become members of a larger community of practice with common educational concerns. Veugelers (2005) also maintains that teacher networks can not only implement but also impact educational policies if the organization of teacher networks achieve a balance between the formal and the informal in terms of structure, leadership, methods, and communication. In England, a series of studies investigated the operation of international school partnerships and their influence on participating schools, leaders, teachers, as well as students. From the year 2007 to 2010, the global children’s charity PLAN launched a School Linking Programme to support the development of partnerships between schools in the United Kingdom, Africa, and China. Based on both survey data and multiple case studies, the first year report of the project found that there are perceived benefits and impacts of the Programme on both student learning and teachers (Edge et al., 2008). For teachers, the report shows that they can benefit from the following three areas: fostering a more positive attitude regarding global issues, access to a wider range of teaching strategies, and raising the level of teacher expertise in the school. Another study confirms the impact of school partnerships on teachers in the following areas: skills related to school work; pedagogic changes as a result of mutual learning and reflecting on practice; global awareness; cross-cultural knowledge; and knowledge about other education systems (Edge, Frayman, & Lawrie, 2009). In addition, interactive network activities that help teachers learn are identified in this study, including teacher in-person exchanges, shared teaching and observation of teaching, and special theme days or events related to partnership (Edge et al., 2009). A later study report by Edge, Higham, and Frayman (2010) further confirms that by connecting classrooms international school partnerships create an array of opportunities for teachers’ professional learning and growth. Other than these above reviewed studies, I could not locate other studies that address the influence of international teacher or school networks on teachers. The paucity of evidence on this topic is also observed by Edge and Khamsi (2012) in their study on the influence of international school partnership on students’ global education. Moreover, the information about Chinese schools and teachers’ involvement in the PLAN’s international school linking programme is not
available. Regardless of the scarcity of research, however, some positive effects of INPLCs on teachers are evident as these foregoing studies show.

All the studies related to INPLCs address the conditions and difficulties of building and sustaining international cross-cultural professional communities. Edge et al. (2009) summarize various challenges in developing successful and sustainable international school partnerships: difficulties in communication with the partner school; lack of funding to support in-person exchanges and teacher release time; the demand of commitment and time input; the need for strong and sustainably supportive leadership; language difference; and issues resulting from physical distance between partners. It is also suggested that the long journey of building international school networks should begin with hard and crucially valuable early developmental activities including pairing partners, initial exchanges (Edge et al., 2009), early collaborative activities for the purpose of building a common educational philosophy and developing structures and leadership (Veugelers, 2005). In the same vein, Stoll et al. (2007) also stress the difficulties in developing and sustaining international PLCs for school leaders. However, their study also identifies a successful example of an international learning community between England and Canada. This successful INPLC for school leaders features a clear focus, defined learning modes, an international team of facilitators, as well as a series of learning activities, including visits, email exchanges, video conferences, written reflections, meetings, and a closing symposium. Thus, despite obvious difficulties and demanding conditions, it is still possible to build INPLCs of educators given some appropriate organizational conditions are in place. For instance, Stoll et al. (2007) particularly point out two important factors: one, the design of the learning mode and theme, such as two-way dialogue, school visits, focused group meeting, and leadership coaching; two, the role of change agents such as idea champions, external experts, external facilitators, or external critical friends.

Edge et al. (2008) also highlight the importance of building communication infrastructure in order to facilitate and sustain school partnerships. They suggest the need to consider the following five aspects of communication between school partners: frequency of communication; the need of mediation for communication; alternative methods of communication; resourcing for communication; and opportunities for face-to-face communication and visits. Based on similar studies, Edge et al. (2009) continue to suggest other factors conducive to building international
school partnerships, including personal connections, whole-school involvement in the decision-making regarding partnership formation, clear purpose, supportive leadership, and the assistance of supportive external organizations. Interestingly, they find that differences and similarities between schools do not seem to impact partnership formation and development. In terms of factors contributing to the sustainability of school partnerships, Edge et al. (2009) recommend to pay attention to the following aspects: financial support; non-financial support from school districts; staff training on partnership development; strong and supportive leadership; strong staff support; students’ and parents’ support; strong connection to the school goal and priorities; persistence in pursuing partnership objectives; and a variety of communication methods. Perhaps not all of these conditions for building and sustaining international school partnerships apply to the INPLCs in this study because the Canada-China setting differs from that of these reviewed studies. However, the existing knowledge and evidence offer the researcher a starting point and angles from which I can systematically consider how the Canada-China school network emerges and evolves.

Summary

In summary, the literature suggests that internationally networked PLCs (INPLCs) share many common features with the PLCs within schools and within national education systems. Emerging INPLCs and local PLCs are built on the same epistemological belief that learning occurs in social interactions. Moreover, all kinds of PLCs share the similar purposes and effects that enhance teacher learning, student achievement, and school improvement. Meanwhile, international school networks and associated teacher learning communities obviously have unique properties and require special considerations in terms of building conditions, sustainability, and the impact on schools, teachers, and students. Research has provided some evidence that international school networks contribute to local educational practice through educators’ mutual sharing and learning, knowledge and practice. However, it seems that there is no evidence to show that professional learning in international PLCs can be linked to the implementation of local education reforms, which seems to be a main theme of many national school and teacher networks (e.g. Katz et al., 2009; Veugelers, 2005; Lieberman & Wood, 2003). It seems that the benefit of schools and teachers’ participation in international school networks
can only be justified in terms of general educational and professional interests. It is also clear that a variety of collaborative activities between and among participating schools and teachers facilitate professional learning. Furthermore, it seems that now educators have opportunities to participate in similar activities in all kinds of PLCs, be it within schools, within national systems, or across borders, owing to advanced communication technology and ease of travel within a country and internationally. Indeed, in this new age PLCs can easily be networked and extended internationally.

The literature review also suggests that all kinds of PLCs may encounter similar difficulties in terms of creating and sustaining teacher communities that truly enhance professional learning and improve practice. Several studies related to internationally networked PLCs suggest that it is even harder for international networks to be created and sustained than those in local settings due to various special factors such as communication, language, physical distance, and differences between education systems. However, the evidence on conditions and sustainability of networked PLCs is limited; and it is even more so with respect to internationally networked PLCs (Stoll et al., 2007). No international initiative and research has been conducted in a Canada-China setting and the existent knowledge about organizational conditions for building and sustaining INPLCs between Chinese and Canadian schools remain unknown. Moreover, almost no research has focused on the organizational conditions for the early development of international school networks and associated teacher communities. Therefore, there is a need to probe into the factors that support or inhibit the operation of educators’ PLCs in international settings so as to provide more knowledge in this regard and benefit future initiatives of this kind.

Obviously, the evidence of the impact of teachers’ cross-boundary professional learning on teachers and on school practice is even more limited than that of school-based or within-system PLCs. Only a limited number of studies involving certain cultures and countries show the potential of this kind of out-of-the-box professional learning. No information has been found about Chinese schools and teachers’ involvement in this kind of international initiatives and research although clearly Chinese educators are becoming international players thanks to the country’s recent economic success and the government’s disposition to internationalize education. Questions like how Chinese educators view and handle this kind of cross-boundary learning opportunities and how their participation links to their local practice remain to be
answered. All in all, given unique differences between every two cultures and every two education systems, the conditions, process, content, and impact of international professional learning should be carefully investigated within particular sociocultural and institutional contexts of participating schools and teachers. The next chapter will describe the context of this study that features Ontario and Shanghai culture and education.
Chapter 3
Context

In comparative education research, context has always been regarded as a crucial component to enhance understanding comparatively (e.g. King, 1973). A recent review of literature still confirms that dealing with context is indeed a common concern among comparative education scholars (Foster, Addy, & Samoff, 2012). In the present globalized world, arguably, local and contextual information becomes even more important for studies that seek to understand education comparatively (Crossley & Jarvis, 2001). Moreover, as a qualitative comparative study, the contextual information relevant to the phenomenon in question is indispensable. I believe that research participants make their meanings through interacting with the society where they live, with other people around them, with the structure and traditions of the organizations where they work, and with the history of the place where they dwell; therefore, the meaning created by individual participants should be examined and interpreted within these elements of context where the meanings are made (Miles & Huberman, 1994). For this particular study, there is a need to deal with different historical, social, cultural, economic, and even political situations in the two places—Ontario in Canada and Shanghai in China, where participants live and the research schools operate. Meanwhile, it should be noted that the study, as well as the RL Project with which the study is associated, tried to investigate connections between the two places against the backdrop of economic and cultural globalization. Thus, it is crucial to provide contextual information about the two places and the two educational jurisdictions that are involved in the study so that readers can better understand what happened in the connecting space and how things within the space link to the locality.

This chapter provides a brief history of Shanghai and Ontario and some basic information about the two education systems that is relevant to this study. Firstly, I present a brief introduction to Shanghai’s history, culture, and development. This introduction is followed by a review of Shanghai’s school education, curricular reforms, teacher development, and education internationalization. Secondly, I provide a comparable review about these aspects of Ontario. At the end of the chapter, I summarize and compare some main commonalities and differences between the two places. Even though Ontario is a province while Shanghai is a provincial municipality, they have a comparable status in terms of economic development and educational
achievement in their respective country. More importantly, juxtaposing the differences and similarities of the two places will facilitate the analysis and understanding of the data that are collected from Ontario and Shanghai participants of the study.

Shanghai, past, present, and its school education

Geographic facts

The English word Shanghai represents the Chinese word “上海”, which means “upon the sea” in Chinese. Shanghai is also called “Hu” (沪) as the abbreviation or sometimes “Shen” (申) as its nickname. The origin of the name Shanghai has different versions. The most recognized one says that the name Shanghai came from one description of the feature of the area in a history book in the Yuan Dynasty (1271-1386). The sentence said “it is located upon the sea” (其地居海上之洋) (Wang, 2015). The literary meaning of the name Shanghai vividly reflects its geographic location. Shanghai is located at the east coastal line of China, bordering two provinces, Jiangsu and Zhejiang, to the north, south, and west. The east boundary of Shanghai is washed by the East China Sea, the west part of the Pacific Ocean closest to China’s east coast. The south side of Shanghai faces Hangzhou Bay. To the north, the mouth of the Yangtze River borders the large city; it is the longest river in China and pours into the East China Sea. The geographic location has given Shanghai a northern subtropical maritime monsoon climate. It has four distinct seasons with abundant rainfall throughout the year and an average temperature of 17.6 degrees Celsius (Shanghai Basic Facts, 2014).

The area of Shanghai is 6,340.5 square kilometers. The Shanghai municipality now governs 16 districts (Shanghai Basic Facts, 2014), which are spread across the main land area of Shanghai and three islands at the mouth of the Yangzi River with eight relatively smaller ones concentrated in the downtown area of the municipality. These downtown districts are more developed than the other eight in terms of economy and education because the eight districts used to be rural area counties and most of them were converted into urban districts during the last two decades of the 20th Century while one of them, the Chongming County, was just converted to be a district in July 2016 (Yang, 2016). Not surprisingly, Shanghai is known for rich water resources. Its water area amounts to 11% of the city’s total territory. The largest river
winding through the city is called the Huangpu River. Originating from the Taihu Lake in the neighbouring Zhejiang province, the 113-kilometer-long river enters the city from the south-west side, passes right across the downtown area, and then flows into the Yangtze River in the north of the city. All the four Shanghai research schools in this study are located in two of the eight former rural districts. One of them is located by the Huangpu River; and therefore, the school features Water Education because of its proximity to the Huangpu River.

History and development

Shanghai was once known as the “Paris of the East” and used to be called “the most cosmopolitan city in the world” in the 1930s (Anonymous authors, 1934). Before the Opium War (1839–1842), Shanghai had already grown into a regional urban center thanks to its central location along China’s eastern coastal line and its favorable location in the Yangtze River Delta. Shanghai was an excellent sea and river port for trade between China and foreign countries. However, it was only during and after the Opium War that Shanghai gradually became an international metropolis. Shanghai saw its first westerner move in and live in the city after the unequal Nanking Treaty was signed between the United Kingdom and the Qing Dynasty (1644-1912) as a result of the Opium War (Wasserstrom, 2009). Shanghai was forced to become a treaty port, along with four other Chinese cities, open to foreign trade and settlement.

During the treaty-port century of Shanghai (1843-1943), the city was turned into a “paradise for adventures” for foreigners and local capitalists (Wasserstrom, 2009). Over that period, local Shanghainese experienced dramatic social, economic, and political transformations of the city. They saw a great number of British, French, and American merchants and their families settle in the city, underwent Japanese occupation, and subsequently were governed by the Nationalist Party led by Chiang Kai-shek. Shanghai was taken by the Communist Party led by Mao Zedong in 1949. The People’s Liberation Army came to take over the city and Chen Yi, a General of the People’s Liberation Army, became the first Mayor of Shanghai. Since then, especially after China re-opened its door to the world after the Cultural Revolution, Shanghai started a new transformation under the governance of the Communist Party.
Shanghai now plays a very important role in China’s economy, which is now the second largest economy in the world. With only 0.06% of the nation’s land area, in 2013, Shanghai contributed 3.8% of China’s Gross Domestic Product (GDP) (Shanghai Statistical Yearbook, 2014). The city’s GDP per capita reached US$14,547, which was equivalent to the level of a medium-developed country in the world (Shanghai Basic Facts, 2014). Actually, it had surpassed Hong Kong and became the richest city in China as early as in 2009 (Bloomberg News, 2014). However, the overall GDP per capita of China is only US$7,589 (Statista, 2015), which is almost half of that of Shanghai. Therefore, Shanghai cannot be regarded as a typical representative of the whole China in terms of economy, and probably in terms of education either.

Shanghai’s economic development has shifted its weight to tertiary industry like many developed countries. In 2013, the proportion of tertiary industry in Shanghai’s economic structure reached 62.2%. Generally speaking, the larger the proportion that the tertiary industry or service sector takes up in an economy, the more developed it is. Shanghai also strives to become an international financial center. While the city attracts a great number of domestic and foreign enterprises to set up businesses in this fast growing economy, in the financial sector alone Shanghai had a total of 1,240 financial institutes, including more than 400 foreign investment financial institutions by the end of 2013 (Shanghai Basic Facts, 2014). Contemporary Shanghai is thus believed to be the dragon head of China’s rise. And probably Shanghai is the most cosmopolitan place in China because of its legacy from the last century; and presumably foreign ideas and practices have rushed into the city alongside international trade that has long been the major developmental impetus of the city since the treaty-port century. Given its rapid ongoing transformations with the goal of becoming a cultural and economic center of China, it will likely become a cosmopolitan city in the world again (Wasserstrom, 2009).

**People and culture**

Shanghai is the second largest city by population in China according to the 2010 Population Census of the People’s Republic of China (National Bureau of Statistics of People’s Republic of China, 2010). The resident population of Shanghai is over 24.15 million (Shanghai Statistical Yearbook, 2014), including 14.25 million permanent residents and 9.90 million residents from other parts of the country (Shanghai Basic Facts, 2014). Among the permanent residents in
Shanghai, 98.8% of them are of the Han Chinese ethnicity while only 1.2% belong to minority groups (Tang, 2011). Across China, there are 56 ethnic groups. Shanghai is also an international metropolis where many expatriates work and live. There are over 176,363 foreigners living in Shanghai, including 7832 Canadian citizens (Shanghai Statistical Yearbook, 2014).

Due to its special historical development trajectory in China and in the world, the culture of Shanghai has absorbed many Chinese local cultures and been evidently influenced by western cultures at the same time. Shanghai is known for its “海派文化 (Hai Pai Wen Hua)”, which means “Shanghai Style Culture” in English. The main feature of the Shanghai Style Culture is believed to be “accepting hundreds of rivers as the ocean; inclusiveness and assimilation”, which is “海纳百川; 兼容并蓄 (Hai Na Bai Chuan; Jian Rong Bing Xu)” in Chinese. With this feature, Shanghai culture not only is rooted in traditional Chinese culture and the essence of local culture but also absorbed a variety of elements from foreign cultures, especially western cultures, due to Shanghai’s unique historical legacy in the past century. As Shanghai assimilates various local and international cultural influences, the culture also shapes Shanghai people’s thinking and ways of doing things at the same time. Definitely the people in Shanghai, or Shanghainese, are not unfamiliar with the mentality of learning from others and from the outside world. It is they who have created and continue creating an open-minded, inclusive, diverse, creative, and cosmopolitan city.

Shanghai School Education

Unlike many other cities in China, Shanghai is a provincial municipality directly under the Chinese central government. There are only three other municipalities directly under the Central Government including Beijing, Tianjing, and Chongqing. Under the direct administration of the Ministry of Education of the People’s Republic of China, Shanghai always enjoys a certain degree of autonomy in terms of experimenting with and implementing new educational policies (Tan, 2013; Marton, 2006). For examples, Shanghai is the first city that implemented the 9-year compulsory education policy in 1978; Shanghai also enjoys a college entrance examination relatively independent of the national examination, the Gao Kao; and it also led the most recent Gao Kao reform alongside Zhejiang province in 2014 (The State Council of China, 2014).
Shanghai is always an advanced sector in China’s education system (Fu, 2007), owing to the relatively higher degree of freedom in administering its education compared to many other places in China and its special status in the country’s social, cultural, and economic development. In 2013, 99.9% of school age children attended the nine-year compulsory education (Shanghai Basic Facts, 2014). According to the 2010 Population Census, about 22% of the city’s permanent residents received education at college level and above. Worldwide, Shanghai also gains its reputation on student achievement due to its participation in the 2009 and 2012 PISA tests. Shanghai was the first place winner among all the participating countries and regions across all the three tested areas, namely mathematics, science, and reading (OECD, 2013; OECD, 2010). This phenomenal educational achievement sparked a wave of learning from Shanghai by other education systems around the world (Jackson, 2014; Howse, 2014; Tan, 2013; Friedman, 2013; Tucker, 2011).

The current Shanghai education is governed by a comprehensive administrative authority, Shanghai Municipal Education Commission (MEC). The MEC was established during 1994 to 1995 by merging two bureaus which administrated school education and higher education respectively (Lee & Hook, 1998). The administration of Shanghai education has two levels—the MEC at the municipal level and Education Bureaus (EBs) at district or county level. There are 16 EBs across Shanghai. The two levels of educational administration oversee both publicly and privately funded school education in Shanghai. While the MEC formulates policies, supervises and evaluates school reform and development across the municipality, these EBs are given the authority to administrate K-12 schools in respective jurisdictions and to design and implement district-level initiatives in schools (Shen, 2007).

The structure of Shanghai school education consists of primary education (5 years from Grade 1 to 5), junior secondary education (4 years from Grade 6 to 9), and senior secondary education (3 years from Grade 10 to 12). The primary and junior secondary education are compulsory for school age children; and children can go to public schools close to their home without taking tests. However, students need to take the high school entrance exam, or “Zhong Kao” in Chinese, to be enrolled into senior secondary schools, while senior secondary school students need to take Shanghai Gao Kao to be recruited by higher education institutes. Given the pressure from these examinations, as well as other sociocultural factors such as cultural expectation about teaching
and the tradition of Chinese teaching (Deng & Zhao, 2014), Shanghai teachers are found to teach in a unique “student-centered and teacher-dominated” approach, which encourages student participation while still transmitting basic knowledge and skills and stressing “classroom discipline, exam techniques and the assignment of homework” (Tan, 2013, p. 215).

In 2014, there were 757 primary schools and 768 secondary schools in Shanghai with 802.9 thousand kids in primary schools, 426.8 thousand students in junior secondary schools, and 157.4 thousand students in senior secondary education. Among all the secondary schools, 55 of them are named as “Experimental Model High School”, following a policy that was introduced in 2004 (Shanghai MEC, 2013; 2004a). These special high schools are expected to be leading players during the course of the development of Shanghai basic education (Shanghai MEC, 2004a); and unsurprisingly, those who study in Experimental Model High Schools are more likely to enter prestigious universities. In 2015, about 88% of senior secondary school graduates in Shanghai go to universities (Shanghai MEC, 2015a), compared to the national rate of 75% approximately (Xinhua Net, 2015). Given the high college enrollment rate, however, Shanghai Gao Kao is still very competitive and high-stakes (Deng & Zhao, 2014). For Shanghai secondary school graduates, probably it will still be true that it is “the one exam that determines your life” until the new 2014 Gao Kao Policy takes real effect in the future (Yao, 2014). One of two participating Shanghai high schools in this study is an Experimental Model High School, which enjoys the privilege of municipality-wide student recruitment and more educational resources, while the other is an ordinary community high school.

**Shanghai Curriculum Reforms**

Shanghai has been carrying out basic education reforms for more than 20 years (Wang, 2011). From 1988, the Shanghai government launched two waves of curriculum reforms that significantly impacted and are still impacting teaching and learning in schools (OECD, 2011). The current curriculum is the culminating result of the second wave curriculum reform that was started in 1998. In 2004, Shanghai promulgated its current curricular blue print for primary and secondary education. Following the spirit of the Guideline of Basic Education Reform of China (Chinese Ministry of Education, 2001), the main purpose of the new Shanghai curriculum is to transform students from passive knowledge receivers to active participants in learning in order
for students to cultivate creativity and independent thinking, improve practical skills, and develop comprehensively (Shanghai MEC, 2004b). The new curriculum promotes a student-centered teaching approach in which students are supposed to select their courses and learning through an effective combination of receiving, experiencing, inquiry, and exploring (Shanghai MEC, 2004b).

The goal of the current curriculum reform is consistent with the goal of Quality Education (Suzhi Jiaoyu) formulated in China in late 1990s, which reflects the idea of a student-centered, more holistic approach to education (Dello-Iacovo, 2009). This goal is supported by the change in the new curriculum structure. The new structure contains three components. The first is called the Basic Curriculum. It is mandated by the government, targets all students, and is implemented through compulsory courses. The second is called the Extended Curriculum, which aims to develop students’ differentiated learning and developing needs. The Extended Curriculum is implemented by a combination of elective academic courses and compulsory social practicum. The third component is the Inquiry Curriculum, which aims to help students learn to learn and learn autonomously through independent inquiry and exploration on the topics linking to their experience, given the support and guidance from teachers (Shanghai MEC, 2004b). Like the courses of the Extended Curriculum, the courses for the Inquiry Curriculum can also be designed within the school provided basic guidelines from the Shanghai MEC. For students, they must have a certain amount of learning experience in relation to the Extended Curriculum and the Inquiry Curriculum.

It might be too early to judge how effective these curriculum reforms are. Several studies suggest that although the ideas of Quality Education are inspiring, examination-oriented teaching and rote learning might still dominate classrooms and teachers’ professional autonomy might be jeopardized by sociocultural factors that impact education but are uncontrollable by these reforms (Deng & Zhao, 2014; Dello-Iacovo, 2009). Actually, Shanghai government and the MEC also has a sober mind on this matter too. On the outset of one key education policy document, the MEC summarized the point that Shanghai primary and secondary students are still overloaded with the burden of learning and assignments and that Shanghai school education still focuses too much on teaching for good marks rather than for students’ growth (Shanghai MEC, 2010).
Therefore, Shanghai never slows down its steps of education reform for school education improvement. Hopefully, the most recent new policy on Gao Kao, after it is fully implemented, can eventually realize the ideal of “education for every child’s life long development” (Shanghai MEC, 2010). In September 2014, Shanghai, alongside Zhejiang province, started a new Gao Kao experiment in China. The Shanghai new Gao Kao allows students to choose test subjects within a wider range of subjects given that the three main subjects—Chinese, Mathematics, and English—are compulsory. Moreover, students can take examinations for these selected subjects and English more than once. In addition, the new policy is accompanied by autonomous student recruitment by higher education institutes and the inclusion of internal assessment by secondary schools, which are incorporated into the college admission criteria (Shanghai MEC, 2014a). The fundamental goal of the new Gao Kao is to promote Quality Education by changing the situation that Gao Kao is the only criteria of college admission (Yan, 2014).

**Shanghai teacher development**

It is believed that the success of Shanghai education is largely owed to its teacher development strategies (Tan, 2013; OECD, 2011). It might be difficult to empirically test this claim; however, it is true that Shanghai was the first place in China that required continuous teacher learning and development (Fu, 2007). There are 42.5 thousand teachers working in primary schools in Shanghai while 63.1 thousand teachers work in secondary schools. According to the teacher and student numbers reported in the MEC 2014 annual report, the teacher to student ratio in Shanghai elementary schools (Grade 1 to Grade 5) is about 1:18.8 and that of secondary schools (Grade 6 to Grade 12) is 1: 9.4 approximately. Teachers who teach in Shanghai schools should obtain Teacher Certificates issued by the Shanghai MEC after applicants meet a range of qualifications including a university degree and the ability of speaking Mandarin (Shanghai MEC, 2004c). For in-service teachers, in order to meet the needs for education and curriculum reform, Shanghai has been emphasizing experienced and new teachers’ learning and development since 1989 when Shanghai published the first provincial level regulation in this regard in China (Fu, 2007). The 1989 regulation stipulates four categories of teacher professional development: teacher in-service training, novice teacher training, formal educational degree, and learning related to the second degree (Shanghai Education Bureau, 1989).
Currently, Shanghai government and the MEC have very specific teacher learning and development requirements. Every in-service teacher should complete at least 360 hours of learning within 5 years; secondary school senior-grade teachers have to complete 540 hours at minimum while novice teachers during probation need to complete at least 120 hours of probation training. According to a national regulation about the registration of teacher qualification, teachers in China must complete the required hours of training before they are permitted to renew their teacher licenses every five years (Chinese Ministry of Education, 2013). Homeroom teachers (Ban Zhu Ren) need to take at least 30 hours thematic training in addition to their subject specific learning. All these teacher development opportunities are combined by municipal level training (10%-20%), district level training (30%-40%), and school level training (50%) (Shanghai MEC, 2011). As such, given these systematic policies on teacher development, Shanghai teachers seem to be constantly participating in professional learning throughout their career.

At the school level, three main mechanisms help every teacher learn and improve their teaching skills, including mentoring, teaching research groups (Jiao Yan Zu), and lesson preparation groups (Bei Ke Zu). Research finds that these professional learning platforms in Shanghai schools are built in the structure and rooted in Chinese culture (Tan, 2013; Paine & Ma, 1993). Especially, teaching research groups and lesson preparation groups provide the primary avenues for new teachers to learn how to teach and for experienced teachers to continuously hone their teaching skills. The teaching research groups in China were originally modelled on a collective approach of school-based teacher development of the former Soviet Union in the early 1950s; since then, the teaching research group and other corresponding activities, such as lesson study, have become standard practices for in-service teachers in China (Tsui & Wong, 2009). Using the language from the western literature these teaching research groups where teachers collaborate and learn can be named as in-school professional learning communities (PLCs). Actually, this kind of PLCs is still a common practice in all parts of China now (e.g. Zhang & Pang, 2016; Sargent, 2015; Sargent, 2009).

There are two main factors that ensure these in-school PLCs work effectively for both teacher learning and student achievement (Tan, 2013). Firstly, it is a matter of fact that the teaching research group is built into the school structure (Paine & Ma, 1993). Teachers in Shanghai have
relatively fewer teaching hours, compared with many other systems around the world; teaching-research group activities are built into the regular school timetable; teacher collaborative activities are considered for teacher appraisal; and teaching-research group leaders are paid extra for their leadership (Tan, 2013). Secondly, the sociocultural factor of collectivism means Chinese teachers have no problem with sharing resources with colleagues or opening classroom doors to colleagues (Paine & Ma, 1993). Collaborations within teaching-research groups are perceived by Shanghai teachers as respectful, trustful, and mutually beneficial (Tan, 2013).

Internationalization of Shanghai school education

As Shanghai continues reforming its education, internationalization has become one important component and goal of its educational development, including the development of K-12 school education. The main rationale for education internationalization, as stated in The Shanghai Medium and Long Term Educational Reform and Development Guideline (2010-2020), is that Shanghai is becoming an international metropolis featuring an international financial center and an international shipping center. Therefore, students in Shanghai must develop “global awareness and international communication skills” and the abilities of international collaboration and competition. At the same time, Shanghai education as a whole, including both school education and higher education, needs to enhance its “international attractiveness, influence, and competitiveness”. To this end, Shanghai schools are encouraged to “investigate international understanding education and associated activities”; in particular, secondary schools are encouraged to “expand the scope and channels of international exchanges for students”; also, Shanghai’s MEC will experiment with recruiting international students to local schools and experiment with international curricula at the secondary school level (Shanghai MEC, 2010).

Since the Shanghai government and the MEC are disposed to internationalize their education, schools and the Education Bureaus (EBs) at the district level are actively involved in international exchanges and collaborations. For example, the district where three participating schools of the study are located has been involved in a variety of initiatives for education internationalization. The website of the EB of the district shows that schools in the district have been involved in various international activities such as forming sister school partnerships, visiting schools overseas and receiving visitors from foreign schools (http://www.mhedu.sh.cn/).
Moreover, in 2014 the district established a new joint international high school as the result of cooperation between one Shanghai public high school and one American private high school; and it is the first of this kind in Shanghai (Shanghai MEC, 2014b). In order to improve language skills, teaching skills, and international communication skills of teachers, the district sent teacher delegations, especially English teachers and bilingual teachers, to study overseas for four to six weeks (Minhang Education Bureau, 2004). It is noticeable that most of these international connections and collaborations of the district were made with western developed countries, especially those in Europe and North America.

Certainly, in Shanghai this kind of exchanges and collaborations with foreign education systems happens not only at district level but also at the municipal level. For example, the 2014 Annual Education Report (Shanghai MEC, 2014b) shows that in this year Shanghai exchanged 130 primary school math teachers with England, signed a new educational cooperation agreement with the Rhone-Alpes region in France, continued the cooperation with Espoo in Finland, and organized a youth camp involving 121 students and teachers from 17 international sister cities of Shanghai. For teachers particularly, since 2012, Shanghai MEC has been sending public school teachers overseas to participate in relatively long-term study (over six months) (Shanghai MEC, 2012a). The Shanghai government provides funding (100 thousand for each person) to those selected teachers. During their study, either as visiting scholars or as students in a degree program, these teachers still keep their teaching position and basic salary at home. Over the past four years, all the destinations of these teacher training candidates are in western developed countries either in North America or in Europe (Shanghai MEC, 2015b; 2014c; 2013b; 2012b). Moreover, the teachers who visited and studied abroad would be asked to share their learning experiences and achievement among other teachers (see an example www.mhedu.sh.cn/xwbs/zhjh/190611.htm). In summary, given the policy intention of education internationalization and all these associated opportunities of sharing and collaborating with foreign education systems and schools, Shanghai schools and teachers are definitely not unfamiliar with the idea and practice of learning from and being learned by educators in other countries, especially those in the western developed world.
Ontario, past, present, and its school education

Geographic facts

Ontario is Canada’s second largest province. It is named after Lake Ontario, and the word “Ontario” is believed to possibly come from an Aboriginal Iroquois word for beautiful water (Government of Ontario, 2015). Ontario covers more than one million square kilometres of land and fresh water (Ontario Ministry of Finance, 2015). To the east, Ontario is bounded by the largest Canadian province Quebec while another province Manitoba borders its western side. On the map, we can see Ontario is flanked by Hudson Bay to the north and the St. Lawrence River and the Great Lakes to the south, which includes Lake Ontario. The St. Lawrence River and the Great Lakes also constitute the border between Ontario and the United States of America (USA). Other than abundant water resources, about 66% of Ontario’s land is covered by a variety of forests (Immigration Ontario, 2015a). The provincial Government of Ontario governs 444 cities and towns including the capital city of Canada Ottawa and the Great Toronto Area, which is the most populated region in the country (Immigration Ontario, 2015b; Statistics Canada, 2014a).

Enjoying favorable geographic features, the climate of Ontario is quite human friendly with spring and autumn having pleasant weather and temperature and summers being mildly hot. However, winters in Ontario can be very cold depending on different regions and different years. Northern Ontario is much colder than the southern part of the province, whose climate is greatly influenced by the surrounding Great Lakes (Environment Canada, 2013). Southern Ontario is believed to be one of the most suitable places for human settlement in Canada thanks to its moderate temperatures in winter and summer and year-round well-distributed precipitation (Environment Canada, 2013). All the four Canadian research schools of this study are located in an urban area in southern Ontario.

History and development

Before Europeans came, the land where the present Ontario lies was the home of aboriginals who came from Asia and have lived in the continent for more than 12,000 years (Whitcomb, 2007). From the 1600s, British and French immigrants gradually turned this land into a European
colony (Government of Ontario, 2015). The land of the previous British colony where the present Ontario is located was called as Upper Canada following the enactment of a British Constitutional Act in 1791 when this land received many British colonists and Iroquois from America due to the impact of the American War of Independence (1775-1783) (Government of Ontario, 2015; Public Archives, 1914). Another effect of the American War of Independence is that the border between Ontario and the USA was fixed at the St. Lawrence River and the Great Lakes. In 1867, Upper Canada was given a new name “Ontario” and became one of Canada’s provinces (Government of Ontario, 2015). By then, the population in Ontario increased greatly over that before 1812 and it was already the home of a variety of ethnicities including Aboriginals, British, French, Germans, Scots, Irish, thanks to favorable immigration policies (Government of Ontario, 2015; Whitcomb, 2007).

At the beginning of the 20th century, Ontario experienced a great economic boom alongside the USA and Europe. The demand of exports from the two places created opportunities for Ontario; and capital investment flooded into Ontario to boost industries such as mines, energy, and construction. With the economic boom, more immigrants from England and the European continent arrived in Ontario (Whitcomb, 2007). Ontario’s indirect involvement in the World War I (1914-1919) disrupted somewhat, but not significantly, its trend of economic and population growth. However, it was devastatingly affected by the Great Recession in the 1930s. Four years after the outbreak of the Recession in 1929 in the USA, the overall industrial production of Ontario fell more than 50%. After World War II (1939-1945), Ontario picked up the trajectory of economic growth again and after the 1950s ordinary people living in this province started enjoying the benefits of economic growth, such as cars and convenient highways (Baskerville, 2002). It is believed that the 1950s was the most important time in Ontario’s history from an economic perspective (Whitcomb, 2007) and this era led to the 1960s when Welfare State policies in this province alongside the whole of Canada were formed (Baskerville, 2002). As well, Ontario accepted a lot of immigrants from Asia, including Chinese, South Asian, Philippino, and Caribbean Blacks in the 1960s (Whitcomb, 2007); since then, the province, especially the city of Toronto, became one of the most multicultural places in the world.

The geographic features of Ontario create abundant natural resources for the people living in the land; and these resources produce the base of Ontario’s economy including mining, energy,
agriculture, and forestry. While natural resources still play a key role in Northern Ontario, Southern Ontario has become a manufacturing center and the home of many service industries including business, information and technology, and finance (Immigration Ontario, 2015c). Located in the North American Free Trade area, Ontario contributes about 37% of the national GDP of Canada (Government of Ontario, 2015), and constitutes the largest economy across all provinces and territories in the country (Statistics Canada, 2013). Ontario’s economy is leading in Canada compared to other provinces. The GDP per capita of Ontario is approximately US$52,705, while that of the whole Canada is US$41,069 (Ontario Ministry of Finance, 2015; Statistics Canada, 2014b). Canada as a whole is one of the so called Group of Seven (G7) countries that represent about half of the global wealth (Laub & McBride, 2015).

People and culture

Canada is an immigration country. It has received more than 230,000 immigrants annually from countries all over the world since 2004; China has been one of the top source countries for a decade (Government of Canada, 2013). In the whole Canadian population, about one fifth are first generation immigrants and about 3.5% are recent immigrants who arrived in Canada after 2006 (Statistics Canada, 2014c). Since the 1960s, Ontario became one of the most multicultural place in the world (Whitcomb, 2007). Actually, multiculturalism is believed to be “a Canadian reality”; therefore, the federal government of Canada announced its multicultural policy as early as in 1971 (Friesen, 1985, p. 2). The multicultural policy states that Canada has two official languages but no particular official cultures; therefore, the Government of Canada supports all cultures in the society (Canada, House of Commons, pp. 8580-8581, cited in Friesen, 1985). Certainly, the existence of various ethnicities and cultures in the society and the official recognition and support of multiculturalism have profound implications on education, for example the formation of multicultural education programs (Friesen, 1985).

Currently, Ontario is the most populous province in Canada and this will be still the case in the next few decades (Statistics Canada, 2015). The population of Ontario is over 13.5 million with more than 85% of it living in cities along the Great Lakes. Aboriginal peoples make up about 2% of the population in Ontario (Government of Ontario, 2015). Immigration has been the main source of its population growth throughout its history. Ontario now receives over 50% of new
immigrants to Canada (Statistics Canada, 2014c); and the Great Toronto Area of Ontario takes in approximately 80% of Ontario’s immigrants (Immigration Ontario, 2015a). Although English and French are the two official languages of Canada, Ontario has more than 100 languages and dialects being spoken. All the four Canadian schools researched in this study are located in one school district in the Great Toronto Area, which has very diverse demographics in terms of mother tongues (Statistics Canada, 2012). Moreover, over 20% of the population in this region of the province is made up of Chinese people who are mainly from mainland China, Hong Kong, or Vietnam (Statistics Canada, 2010).

**Ontario school education**

The Ontario Ministry of Education is the provincial authority administering publicly funded elementary and secondary school education. Actually, there is no national level educational governing body in Canada. Therefore, the Ontario MOE, like other provincial educational authorities, takes the full responsibility for its education. The MOE sets the provincial curriculum, determine educational policies, and provide funding to public schools (OECD, 2011). Underneath the MOE, public schools are directly administered by 72 School Boards (SBs), including 31 English Public, 29 English Catholic, 4 French Public, and 8 French Catholic SBs. There were 3,980 elementary and 917 secondary schools in Ontario. The grades in Ontario elementary schools start from Grade 1 to Grade 8 while Grade 9 to Grade 12 constitute the secondary school level (Ontario MOE, 2014). The four Canadian research schools of this study belong to one of these English Public SBs. In 2014, the number of elementary school students in Ontario was about 1359.4 thousand (Kindergarten to Grade 8) while that of secondary school was 663.9 thousand (Grade 9 to Grade 12) (Ontario MOE, 2014).

Ontario has been identified as a strong, successful education reformer by the OECD (OCED, 2011). In terms of student achievement on mathematics, reading, and science, Ontario alongside the whole Canada, is one of the top performers among the participating countries of the PISA tests (CMEC, 2013; OECD, 2011). It is believed that Canadians’ valuing of school education, the fact that Canada is a welfare state featuring universal health care and free education as a social service, and educational policies such as provincial standards for teacher selection are contributors to Canada’s education success (OECD, 2011). The OECD attributes the strong
Ontario curriculum reforms

After the Liberal party won the election in 2003, the Ontario government launched a round of education reform that would significantly impact Ontario education in a positive way over the following decade (Gallagher, Cameron, Kokis, Oliphant, & McCartney, 2012; Ungerleider, 2008). Essentially, this round of reform had three main goals: (1) improving literacy and numeracy outcomes in elementary schools; (2) increasing the students’ graduation rate in secondary schools, and (3) building public confidence in the publicly-funded school system (Gallagher, et. al., 2012). This reform was accompanied by a new provincial school curriculum which was drafted at the end of the 1990s by a previous Conservative government responding to global change (O’Sullivan, 1999) and was planned to be fully implemented in 2003 (Ryan & Joong, 2013). This common curriculum for publicly funded schools in the province not only contains specific learning expectations for each subject and grade but also stipulates provincial standards for students’ performance (Ryan & Joong, 2013). Moreover, the Ontario government created an independent agency, the Education Quality and Accountability Office (EQAO), to measure Ontario students’ achievement in reading, writing and math in Grade 3, 6, and 9, as well as literacy in Grade 10. These EQAO assessments are expected to align with and reflect the Ontario curriculum and the common provincial standard (EQAO, 2015). Prior to the EQAO the province had no standardized provincial testing program. Furthermore, access to higher
education is not constrained by the presence of a common secondary school exit exam nor by a university/college entrance exam.

The changes resulting from these Ontario curriculum reforms go beyond the mere content of teaching; they also impact teaching strategies, student assessment, and teachers and students’ perception of success of schooling (Ryan & Joong, 2013). Taking the current math curriculum as an example, it was revised after the 2003 provincial election in order to specifically respond to the results of PISA math test in 2003 (CMEC, 2013). This math curriculum adopted the idea of “mathematical literacy” (Ontario MOE, 2004), which emphasizes students’ “capacity to identify and understand the role that mathematics plays in the world”, mathematical judgement, and engagement in math learning (OECD, 1999, p. 41). As a result, the Ontario math curriculum promotes problem solving as a key teaching strategy and student-centered inquiry-based learning as a primary student learning strategy (Ontario MOE, 2006; 2004). Unfortunately, these teaching and learning strategies, as well as the math curriculum, became an issue for many parents and educators as the PISA 2012 results showed that Ontario students’ math achievement was declining (Huang, 2014). Regardless of the public debate on the effectiveness of the curriculum and these new teaching and learning approaches, problem solving and inquiry-based learning have already taken root in Ontario classrooms; and these strategies are still promoted and required to be implemented by teachers in all subjects and grades (Ontario MOE, 2013a).

**Ontario teacher development**

One of the key ideas behind these curriculum and education reforms in Ontario is building teachers’ capacity at both individual and collective levels (Fullan, 2010a; 2010b). At the beginning of these reforms, Ontario created the Literacy and Numeracy Secretariat (LNS) to support teacher capacity building initiatives in order to improve student learning and achievement in all grade levels across the system (Gallagher, et al, 2012). To this end, the province also provides continuous professional learning opportunities and resources including personnel who assist teacher grow and student learning and resources such as professional learning institutes, webinars, and instructional guides (Gallagher, et al, 2012). It is believed that this “professionally driven” education reform and change is one key to the success of Ontario education (OECD, 2011).
In 2014, there were about 74,961 full-time elementary and 40,194 full-time secondary teachers in Ontario. Thus, the teacher to student ratio in Ontario elementary schools (Kindergarten to Grade 8) is about 1:18.1 and that of secondary schools (Grade 9 to Grade 12) is 1:16.0 approximately, according to the available student and teacher numbers (Ontario MOE, 2014). To teach in Ontario, a person must be certified by the Ontario College of Teachers (OCT) after he or she has completed a postsecondary degree and a four semester teacher education program. With the OCT qualification, one new teacher is required to pass a one-year school-based New Teacher Induction Program that is supervised by the school principal. The new teacher must have demonstrated sufficient knowledge on student learning, curriculum, and teaching if he or she wants to be permitted to continue teaching (Ontario MOE, 2010a). Every experienced teacher in Ontario is required to make and fulfil an annual professional learning plan in collaboration with and evaluated by his or her principal (Ontario MOE, 2010b). For these in-service teachers, professional learning opportunities include formal trainings for necessary knowledge and skills, job-embedded staff development, and an array of professional development activities such as taking Additional Qualification Courses, conducting teacher research or lesson study, and self-learning (Ontario MOE, 2007b).

The idea and practices of professional learning communities (PLC) are definitely not unfamiliar for Ontario schools and teachers. The Ontario MOE defines PLC as “a model for Ontario schools” and stresses that school based PLCs should contain six key components, including ensuring learning for all students, relationship among colleagues, teachers’ collaborative inquiry, focusing on students’ learning results, supportive school leadership, and alignment with common focus of the school (Ontario MOE, 2007a, p. 1). To sustain an effective school-based PLC, the MOE urges teachers to “focus on learning as much as teaching, on working collaboratively to improve learning, and on holding themselves accountable for the kinds of results that fuel continued improvements” (Ontario MOE, 2011, p. 55, cited by MOE, 2013b). At the school level, the practice of PLC is promoted as an important way to support teachers’ continuous learning and development (Ontario MOE, 2010b). Also, each year a few designated Professional Activity or Professional Development days are devoted to in-school professional learning. Moreover, the practice of PLC goes beyond the school level in Ontario. For example, Fullan (2010a) describes the “Schools on the Move” initiative in Ontario, in which over one hundred schools made their experiences and resources available for other schools in the system to learn from them. Moreover,
the MOE also provides some sample practices in terms of professional learning communities across school boards and regions in the most recent assessment and instruction guide (Ontario MOE, 2013a).

Internationalization of Ontario school education

The province of Ontario has an overall strategic plan to internationalize its education including both school education and postsecondary education while the Ministry of Education focuses on the implementation of Ontario’s strategy for K–12 international education (Ontario MOE, 2015). The rationale behind the strategy includes three aspects: international education can enhance students’ academic performance, intercultural understanding, and overall development in the interconnected world; international education can bring social, cultural, and economic benefits to the province; international education in Ontario is consistent with Canada’s federal strategy in this regard as well as existing international partnerships. There are five components in the strategy, including (1) cultivating students’ global awareness, knowledge, and perspectives by working with school boards and schools too; (2) boosting international student recruitment in the competitive global market; (3) educators’ sharing and learning through exchange programs and partnerships; (4) internationalizing the curriculum and students’ learning curriculum; (5) offering Ontario Secondary School Diploma programs overseas.

In addition to the overt student focus of Ontario’s international education strategy, the MOE also believes that educators from different countries and cultures can learn from each other on best practices and pedagogies and that the learning can make a positive impact in schools where they work. It suggests that educators’ learning, sharing, and positive impact can be achieved by hosting international educational delegations, visiting or working abroad, and international academic partnerships, projects, and research initiatives (Ontario MOE, 2015). Moreover, the MOE attempts to provide teachers more international work and exchange experiences and to develop Additional Qualification Courses related to international education for teachers (Ontario MOE, 2015).

However, there is little evidence to show that Ontario teachers are actually involved in professional learning that is related to education internationalization. As far as teachers are
concerned, the policy does not seem to take effect yet. Following the call for education internationalization, Ontario School Boards (SBs) do have specific plans and actions in this regard. Yet teacher involvement is not an obvious priority. For instance, one study describes how one SB supported educators, mostly board leaders and school administrators, to visit other countries to learn others’ experiences and build relationships over a few years (Huang & Reed, 2014). However, the number of teachers who have participated in these overseas learning opportunities is minimal. Another SB states that education internationalization and global education are its priorities; and in 2013 the board promulgated its strategic plan that lays out several focal areas of development in terms of education internationalization (Toronto District School Board, 2013). The list of focuses tells that, in addition to providing more intercultural experiences for local students, the board is obviously even more interested in recruiting more international students for economic benefit. This kind of financial motive with respect to international education seems to reflect the same interest at the provincial level and at the federal level. For the Canadian federal government, education internationalization is a “driver of the Canadian economy”, which can bring in financial benefits through recruiting international students to study at Canadian educational institutes (Ministry of International Trade, 2012).

Summary

Ontario and Shanghai are different in many ways. They are ten thousand kilometers away, one is in North America and the other is in East Asia. Equally different are the demographics of the people, cultures, histories, social situations of the two places. Meanwhile, the two places share many common features too. In terms of culture, underneath the seeming differences due to ethnic composition and historic development, it seems that both places embrace the spirit of multiculturalism, but in different ways. Shanghai is like a melting pot that continuously absorbs different elements of local and international cultures in a way that it becomes one unified culture; whereas Ontario, at least the city of Toronto where I temporarily live now, is more like a mosaic in which pockets of cultures visibly exist in a symbiotic manner. It is the truth that Shanghai people are not unfamiliar with English as a second language and North American culture. It is equally true that Ontario people must have experienced Mandarin, and probably Shanghai dialect too, and Chinese culture, which can be found in various locations such as China towns and
restaurant districts. Economically speaking, both Shanghai and Ontario have acquired enviable status nationally, regionally, and internationally. Indeed, in the sense of culture, history, and economy, Shanghai and Ontario are both important places and their importance not only belongs to their mother nations but also the world and humankind as a whole.

In terms of education, the two places seem to have notable similarities in addition to obvious differences such as different structures of the systems and distinct values of education that are linked to culture and tradition. Both places launched substantive educational reforms at the junction of the 20th century and 21st century. More importantly, these curriculum reforms are still relevant to today’s schools, teaching and learning, in both places. Certainly, Shanghai seems to take on the education reforms in a more progressive manner due to the dramatic social and economic development in the city as well as in China in the past decades. Both Shanghai and Ontario have gained honorable reputations with respect to educational achievement in their public systems; both attach much importance to teacher development and learning as a driver for educational reforms and improvement. The concept of professional learning communities, which is one of the key ideas underpinning this study, seems to be an important ingredient in the practice of teacher professional development in both school systems. In that sense, it can be surmised that teachers in both places can easily take up professional communities between schools in Shanghai and Ontario as a natural extension to their existing practice.

In terms of internationalization of education, both places have developed strategies and carried out actions to promote the idea and ensure its implementation in the systems. Obviously, however, the strategies and actions in the two places have different focuses. Shanghai seems to be making more investment in this regard than Ontario does. Particularly, Shanghai school teachers seem to have more opportunities to be involved in and benefit from initiatives of education internationalization that the government promotes. It seems that learning opportunities related to educational internationalization have become an element of Shanghai teachers’ professional learning schema. For Ontario teachers, however, the idea of education internationalization and associated learning opportunities do not seem to be too relevant to their professional activities except for seeing growing numbers of international students in their classrooms.
Knowing all these differences and similarities between the two places and education systems, this study has embarked on an intellectual journey that closely examines how two groups of educators from the two places interact when they have opportunities to meet and talk, virtually, and even engage in collaborative professional activities that tie with their current school work. Also, the study investigates what reasons bring these schools and teachers together and what makes them embrace these professional and learning opportunities that are seemingly remote from their current practice. Moreover, the study intends to find evidence, if any, of how educators’ involvement in this kind of international professional learning communities impacts their educational views and practice. The next chapter will present a proposed conceptual framework that will be used to guide this exploratory comparative inquiry.
Chapter 4

Conceptual Framework

The conceptual framework for this study contains one guiding concept and three basic components as to the development of and research about internationally networked professional learning communities (INPLCs). The conception of reciprocal learning (Connelly & Xu, 2015) underpinning the RL project guides the study that is associated with the project. Reciprocity is both the founding feature of the international professional communities in the context of the RL project and obviously the expected outcome of collaborative learning activities in these INPLCs. The three components related to INPLCs include organizational conditions for building and sustaining professional communities that enhance teacher learning; learning activities in networked PLCs that facilitate knowledge sharing and creation; and evidence of professional learning related to teachers. The framework is informed by a theory of action about networked PLCs in national systems (Katz & Earl, 2010; Katz et al., 2008; Earl et al., 2006), the literature related to interactive activities and learning processes in PLCs (Wideman et al., 2007; Lieberman & Wood, 2003; Little, 1990), and the knowledge of supportive conditions for PLCs in schools and in networks. In terms of organizational conditions, the foregoing literature review has shown that factors within the school and the network both need to be examined in order to build international PLCs that are supportive for teacher learning.

With respect to evidence of learning, this inquiry gains insights from impact models of teacher development that emphasize changes in teachers’ thinking, knowledge, and practice as results of professional learning (Desimone, 2009; Guskey, 2002; Guskey, 1986). Teachers’ views on education, perceptions on their practice, practical knowledge, and hence practice itself may change due to their participation in professional learning activities. Moreover, how teachers view this kind of cross-boundary learning opportunities and how teachers’ motivation changes due to participation are worth investigating because teachers’ involvement in this project is a voluntary-based extra workload in additional to their existing responsibilities. Especially, in the international setting in the study, how teachers’ participation and learning contribute to their professional identity, particularly cosmopolitan teacher identity, is relevant. The conceptual framework can be summarized using the following Figure 1. This chapter elaborates each element of the conceptual framework and explains how it as a unity guides this exploratory study.
Creating a reciprocal learning space

Reciprocal learning is the guiding concept of the RL project and certainly is the key idea built into the development of the Canada-China sister school network in question. The two directors of the project arrived at the idea of reciprocal learning through Xu’s (2006) work on new Chinese immigrants’ experience in one Canadian school. Xu (2011; 2006) shows that the communication and mutual understanding between Eastern and Western knowledge can be achieved through learning and adaption as new immigrants and the Canadian school engage each other. While new immigrant families learn and adapt to their life and education in the Canadian society, the Canadian school learns Chinese culture and Eastern way of knowing. The two directors believe that this type of reciprocal learning can be achieved between schools, and more generally speaking, between education in Canada and China as educators do something together. Connelly and Xu (2015) clarify that reciprocal learning needs to go beyond the simple comparison between countries in terms of practice, values, culture, achievements and pedagogy and that it should be thought of and practiced as a type of “learning in collaborative work
situation”. That is to say, the goal and practice of reciprocal learning in the context of the RL project focus on a different angle than the prevalent comparative education research which usually operates at a higher academic and policy level. Reciprocal learning in this case means not only a collaborative process that involves practitioners in both sides but also the expected two-way learning outcomes for these participating educators. Despite different cultures, histories, and experiences, the two participating sides are expected to express and reshape their knowledge and practice through the process of interaction and two-way learning.

This study adopts Connelly and Xu’s (2015) conceptualization of reciprocal learning. In essence, there are two key elements in the concept of reciprocal learning that relate to this study. One has to be cross-cultural collaboration; the other is the learning for mutual benefits. From the RL project point of view, the concept of learning is quite inclusive. Reciprocal learning facilitated by the project can be in-service teachers and principals’ professional learning; it can also extend to students’ mutual learning; also it expects the two systems to learn from each other in a general sense. No matter whose and what forms of reciprocal learning are under investigation, the emphasis is that the learning should have mutual effects and should be associated with ongoing collaboration between participants in the two countries. For my particular study, I only focus on teachers’ mutual professional learning through their engagement in international collaborations in the Canada-China sister school network.

In terms of mutual learning, it is certainly true that China has been learning from western culture and education for a long time (Deng, 2011; Hayhoe, 2008) and that the West, including Canada, has also paid increasing attention to Chinese education (e.g. Anderssen, 2014; Tan, 2013; Biggs & Watkins, 2001; Biggs, 1996; Stevenson & Stigler, 1992). Furthermore, culturalists have eloquently argued that Chinese culture can contribute to the global community as much as it receives (Hayhoe, 2015; 2014) and some elements of Confucian philosophy might offer particularly useful insights to some issues associated with the ongoing globalization (Tu, 1996). Despite these inspiring thoughts and practices towards mutual learning and benefit in terms of culture and education between China and the western world, the intention of true reciprocal learning might not be parallel between the two sides. Taking Canada as an example, Connelly and Xu (2015) recently note that reciprocal learning is still not the main idea at work between the two countries. Instead, many influential Canadian figures continue to assume a one-way teacher
role in thinking of the relations, including educational relations, between Canada and China. It is against this backdrop that the two directors of the RL project particularly advocate the idea of collaborative reciprocal learning in education between Canada and China and hence created the sister school network as a reciprocal learning space. They hope that with this interactive learning space in place, educators from the two sides will be able to truly learn about and learn from each other as they collaborate with each other (Connelly, 2010). For comparative researchers, this emerging reciprocal learning space enables historical, systematic, and contextual inquiry involving the two countries instead of simply carrying “knowledge nuggets” from one to another (Connelly, 2013).

The idea of reciprocity that Connelly and Xu (2015; 2013) are proffering through the RL project is essentially consistent with the established concept of mutuality in the comparative education literature. Actually, the issue of mutuality in international development initiatives has concerned comparative scholars for a long time since the research of the World Order Models Project (WOMP) emerged in the 1960s (Leng & Pan, 2013). The scholars associated with the WOMP sought to tackle inequalities in international academic relations by examining not only forms of economic and political domination but also cultural and knowledge domination (Leng, 2015). Particularly, Johann Galtung, who is a leading scholar in the WOMP, proposes a framework of mutuality as an approach to investigating international projects in education. When examining the cooperative projects that occurred in Chinese higher education in the early 1980s, Hayhoe (1986) summarizes four core values of mutuality referring to Galtung’s (1975, cited in Hayhoe, 1986) framework of mutuality. The four core values of mutuality consist of equity, autonomy, solidarity, and participation. Equity emphasizes that the organization of activities accords to mutual agreements between partners; autonomy suggests a reciprocal respect for each other’s theoretical and cultural perspectives; solidarity gives voice to participants in developing countries and encourages interactions among them; participation encourages all parties to equally contribute throughout sharing and interaction (Hayhoe, 1986). Building on these earlier thoughts about mutuality, Leng (2015) recently showed that the research pertinent to mutuality in international academic relations can be complemented by a contemporary cosmopolitan theory that emphasizes equal respect of every human being, reciprocal recognition of everyone’s equal worth, the principle of consent, and both inclusiveness and subsidiarity in terms of decision making (Held, 2003). Leng (2015) actually illustrates how the concept of mutuality that extends
from that of the WOMP can be regarded as a framework of cosmopolitanism that promotes equity and mutual benefits of different communities in the era of economic, political, and cultural globalization.

Although the aforementioned research pertinent to mutuality and cosmopolitanism is not directly related to school education, it is clear that the concept of mutuality and hence theories of cosmopolitanism can lend insights to the conceptualization and research of reciprocity in the context of the RL project. Held’s (2003) vision of a common “ethical and political space which sets out the terms of reference for the recognition of people’s equal moral worth, their active agency and what is essential for their autonomy and development” (p. 473) is obviously enlightening as to the effort of the RL project, although he discusses cosmopolitanism mainly with reference to global governance in the age of globalization. Moreover, I believe that these core values of mutuality that are summarized by Hayhoe (1986) still provide some guiding principles for the development, sustainability, and impact of the school partnerships in this study and in other international settings. These core values of mutuality do not seem to be explicitly related to Connelly and Xu’s (2015) conceptualization of reciprocal learning in the context of the RL project yet they are clearly relevant to it. As well, the change of China’s economic and political power in the global stage might mean several of these values are no longer outstanding concerns in considering the development of the sister school network in the RL project. After all, China now is the second largest economy in the world and other aspects of the nation, such as its culture and education, have gained a much higher status than that of decades ago. Nonetheless, some foundational principles of building the Canada-China sister school network indeed reflect these core values of mutuality and therefore ensure the development of a reciprocal learning space, although the two directors of the RL project do not specifically refer to the concepts of mutuality or cosmopolitanism. For instance, mutual agreements have been signed by participating partnership universities which support the school network; the participation of school leaders, teachers, and students is voluntary; participants from both sides are encouraged to express and share their knowledge and practice with researchers’ facilitation; and annual general meetings are built into the project structure in order for sharing experience among participants as well as researchers. Certainly, it is not the intention of the study to address all these core values in the investigation of reciprocal professional learning of teachers within these INPLCs. However, a clarification of the relevance of these core values as to the RL project and these
INPLCs associated with the project helps establish an intellectual bridge between this research and the broader comparative education literature as well as the PLC literature in both local and international settings.

Actually, the ideas of mutuality and reciprocal learning between civilizations and education systems are consistent with the concerns of mutual respect and mutual learning in the PLC literature. For example, Little (2005a) emphasizes that learning relationship in school networks relies on the foundation of reciprocity—“participants both give and take (p. 279)”. For Hargreaves, A. (2003), reciprocal learning implies openness and shared work, and it is built upon "professional trust" which means "trusting people who may not be well known to them, who are not familiar friends, whose predictability and reliability have not been proved many times in the past (p. 28)". He emphasizes that professional trust is essential for teachers teaching in the rapidly changing knowledge society so that they are willing to experiment and adopt new ideas that are learned from different and distant others. Speaking of development and sustainability of school networks, Veugelers and Zijlstra (1995) maintain that respectful relationship, trustful culture, and mutual learning are important foundations; and teacher learning become even more horizontal and mutual in international networks with common educational concerns (Veugelers, 2005). In international settings, studies on South-North school partnership also address the importance of two-way learning and provide positive evidence of mutuality in the collaborations of educators from the two sides (Edge et al., 2009). All in all, mutuality and reciprocity in teachers’ cross-cultural, cross-system PLCs should not be an imagined dream; rather, INPLCs hold the possibility of evoking real collaborative actions between teachers, schools, and education systems and hopefully lead to reciprocal learning for participants, including teachers.

A framework for teacher reciprocal learning research

Earl et al. (2006) proposed a theory of action about networked PLCs within national education systems and then validated the theory in various contexts (Katz et al., 2008; Katz & Earl, 2010). The theory suggests that enabling conditions for building networked PLCs can be seen within schools and within the network. The theory postulates a causal chain starting from these contributing organizational factors in schools and in the networks, to the activities of professional knowledge sharing and creation, to changes in practices and structures in schools,
and to the impact on student learning and achievement. Little (2005b; 2005a) resonates with the theory of action and proposes a framework for investigating professional learning in networked PLCs: organizational and cultural conditions in schools as well as the networks that are conducive to professional learning; the purpose, scope, process of interactions in the network; impact of network activities on the work within schools; and the evidence of what participants, as well as others in schools, learn. Extending the theory of action and Little's (2005b; 2005a) framework into a cross-cultural setting, this study focuses on conditions for building and sustaining international school partnerships and associated teacher communities, learning activities and knowledge sharing and creation in INPLCs, and evidence of learning with respect to teachers.

Little's (1990) taxonomy of collaborative activities among teachers provides a useful starting point to investigate reciprocal learning activities in INPLCs. She summarizes a range of learning activities with different degrees of interaction, including storytelling and scanning for ideas, aid and assistance, sharing of methods and materials, and joint work. The last category—joint work—is most desirable while the other three types are also legitimate collaborative activities. Joint work is defined as the collaborative work among teachers characterized by shared responsibility for teaching, the need of each other’s contributions, and a confidence in others’ commitment and abilities. Storytelling and scanning for ideas are casual exchanges of information according to personal interest without particular goals of learning; aid and assistance refer to mutual aid and advice that might be requested or expected by other teachers linking to their practice; and with sharing of methods and materials teachers expose aspects of their own work to others such as lesson plans and teaching materials.

This taxonomy can be complemented by others’ observations on learning activities in networked PLCs. Lieberman and Wood (2003) observed a national teacher writing network in the USA and found that the foundation of effective learning activities in the networked PLC is teachers’ knowledge and perspectives, problems of teachers’ interest, and teachers’ mutual responsibilities of professional growth. Canadian experiences offer more practical knowledge on learning activities in networked PLCs. Wideman et al. (2007) show that face-to-face meetings are necessary for building a sense of community and that enough participants sustain the momentum for professional knowledge building. In addition, activity facilitators are important and venues of
sharing and collaboration such as videoconferences and a user friendly online platform are necessary if learning activities in networked PLCs are to be successful.

Given collaborative activities in INPLCs, impact models of teacher professional learning help reveal possible sources of evidence of learning. Guskey (2002; 1986) proposes a model of teacher change suggesting that, after receiving professional development, teachers change their beliefs and attitudes following altered teaching practice and the consequent changed student learning outcomes. Based on this model and related empirical studies, Guskey (2002) suggests that teacher change is a slow and cyclical process which can only be achieved through regular feedback on student learning progress and continuous “support and pressure”. Similarly, Desimone (2009), by referring to the earlier work on characteristics of effective teacher development and other impact studies of teacher learning, posits a causal relationship between professional learning activities, teacher change, and student learning. Although the two well cited impact models of teacher learning depict different change orders in terms of teachers’ practice, teachers’ belief and attitudes, and student learning outcomes, they both suggest that these changes are the proxies whereby researchers can identify evidence of teacher professional learning (See examples Hoekstra & Korthagen, 2011; Karagiorgi, Kalogirou, Theodosiou, Theophonous, & Kendeou, 2008; Bolam et al., 2005; Little, 2003; Garet, Porter, Desimone, Birman, & Yoon, 2001).

Noting the fact that the INPLC under investigation is a relatively new phenomenon, the proposed conceptual framework is only regarded as a tentative guideline which needs to be validated, specified, refined, and probably modified in the light of empirical data. In essence, the proposed framework suggests that a variety of professional activities taking place in these INPLCs are not only where professional learning happens but also the source of evidence of learning. Related to these learning activities are supporting organizational conditions for the partnership building and hence professional learning in this particular Canada-China international professional setting. Subsequently, the framework suggests proofs of professional learning including knowledge and practice change as well as other evidence such as impact on motivation and professional identity.

However, the framework might not fit well with the relatively new phenomenon in question. First of all, the framework is informed by the search conducted in within-system networked
PLCs. The international setting of the study might bring in new knowledge as to the development of networked PLCs and associated teacher learning. As well, despite the desire to see “footprints into practice” as evidence of professional learning in networked PLCs (Little, 2005a), it might be hard to identify concrete changes about teachers’ practice as well as students’ learning. Actually, teachers participating in within-system school networks perceived very differently their changes in terms of thinking and practice; and they did not seem to observe colleagues’ thinking and practice change either (Earl et al., 2006; Katz et al., 2008). In INPLCs, it might be the case that sharing teacher knowledge is rather complicated even if supportive conditions are in place and that consequent change of perception and particularly practice is even harder (see Edge et al., 2009). Therefore, it seems reasonable to doubt the extent to which concrete changes of teaching practice can be found as evidence of learning (Mireles, 2012; Wideman et al., 2007; Little, 2005a). Moreover, it is possible that there are intertwined, cyclic effects of teachers’ motivation, professional identity, knowledge, and practice on the development of school partnerships and the associated professional activities and learning. That is to say, these factors related to individual teachers can be as much influenced by the participation as contributing factors for reciprocal learning between the two countries. All these concerns should be tested in the light of participants’ knowledge. Next I will discuss other three concepts of the conceptual framework—motivation, teacher knowledge, and cosmopolitan professional identity.

Teacher motivation

Motivation can be broadly defined as “the organizing patterning of three psychological functions that serve to direct, energize, and regulate goal-directed activity: personal goals, emotional arousal processes, and personal agency beliefs” (Ford, 1992, p. 3), although the psychology literature provides various other definitions of the construct. There are multiple factors affecting motivation of learning such as task value (Pintrich, 1989), individual intrinsic interest (Schiefele, 1991), personal goals (Ford, 1992), and perceived self-efficacy (Bandura, 1997). These psychological factors do not act alone at one time to affect motivation of learning; moreover, these factors can interact with sociocultural situations within which people live. Bandura (1986; 1989) verifies this observation and stresses that people influence their own motivation and behavior within a system of reciprocally interacting personal determinants, actions, and
environmental factors. In the case of this study, teachers might be attracted to participate in exchange activities in a school network because of their interpretations and opinions about the importance, degree of interestingness, and utility of these activities (Pintrich, 1989). They can also be appealing because of personal interest which gives a teacher an orientation toward certain objects, activities, or areas of knowledge (Schiefele, 1991). Bandura (1997) particularly stresses the crucial regulating power of a person’s perceived self-efficacy relating to the ongoing persistent choice behavior and effort. Perceived self-efficacy is a person’s “belief about what one can do under different sets of conditions with whatever skills one possesses” (Bandura, 1997, p. 37). In addition, the sociocultural factors within and around the participating schools and within these cross-cultural PLCs might affect teachers’ motivation for participation too. Given these psychological insights, it seems that unpacking the motivation that prompts teachers to participate in learning in INPLCs is a complicated but worthwhile pursuit.

The literature on teacher professional learning and development addresses aspects of teacher motivation. For example, Rosenholtz (1989) shows how different types of technical cultures in schools impact teachers’ belief and motivation of professional learning and growth. Eun (2011) argues that the investigation of professional development must pay attention to teachers’ academic, emotional, physical, and motivational aspects and that these elements constitute an inseparable system influencing teachers’ learning and practice. In order for teachers to participate in new learning opportunities outside their existing responsibilities, they need to have good reasons to invest their extra time and energy. Only if teachers interpret the learning opportunities and possible changes of practice as being practical and useful for either gaining new knowledge and teaching skills or improving students’ achievement, then they would take the risk to learn and change (Timperley et al., 2007). Moreover, teachers are adult learners. Therefore, teachers’ motive for learning are more likely tied with the problems that they face in their professional experiences (Knowles, 1973). Teachers bring their past experiences, knowledge of teaching, and beliefs into the current professional learning; and the interplay of these elements may or may not prompt teachers to take up new knowledge and practices depending on complex personal, organizational, sociocultural, and policy factors (Opfer & Pedder, 2011; Timperley et al., 2007).
For the purpose of developing and sustaining teacher PLCs, it is also worthwhile to take teacher motivation into consideration. Roberts (2006) critiques on issues that have been ignored by the community approach of learning including individuals’ predispositions to knowledge, actions, and change. Certain predispositions can create resistance and hence disable community members from being motivated to form an identity in line with a new community of practice (Mutch, 2003). In education, the research confirms that this kind of “balkanized” learning culture can hinder teachers from looking at new resources (Hargreaves, A. & Fullan, 2012, p. 115). Also, mandatory PLCs do not seem to motivate teachers to collaborate and hence learn from each other (Hargreaves, A., 2010). International research also confirms individual teachers’ motivation as to the operation and sustainability of teacher PLC (Sargent & Hannum, 2009) and shows that educators are attracted to international school networks for sharing culture and resources, learning new teaching methods, building personal connections, learning and developing alongside international partners, and benefiting student learning (Edge et al., 2009; Edge et al., 2008). In summary, given wide differences between Canadian and Chinese schools and teachers, it is valuable to investigate and compare reasons at both personal and community levels, for which educators in the two countries are motivated to take up and embrace extra cross-boundary learning opportunities.

Teacher knowledge

In this world, the features associated with the knowledge society and globalization not only demand but also facilitate teachers to share professional knowledge in schools and school networks in the expectation of improving domestic teaching and learning. Teacher knowledge is no longer confined within the walls of schools and the boundaries of countries. In this knowledge sharing and creation process, networking nationally and internationally is a means that disseminates teachers’ knowledge and practice. The literature review has shown that sharing and creating teacher knowledge beyond schools can be realized by building and supporting school networks (e.g. Katz, et al., 2009) or teacher networks (e.g. Lieberman & Wood, 2003). Moreover, the literature related to INPLCs has confirmed to some extent that teacher knowledge can be shared through network interactions and that knowledge creation and sharing in networks can potentially enable teachers to change their perceptions and practice (e.g. Edge et al., 2009;
Veugelers, 2005). Hopefully, this process can bring out innovations that are close to teachers’ practice such that they learn to do things in a different and better way (Hargreaves, D., 2003).

In the literature, there are different thoughts on what teachers should know and actually know in order to teach. Some focus on teachers’ practical knowledge that is embedded in their experience while others focus on the conceptual, technical aspect of teacher knowledge that can be presumably shared by all teachers. One example of the objective approach to teacher knowledge is Shulman’s (1986) conceptualization of pedagogical content knowledge. Shulman (1986) argues that in order to teach effectively teachers need content knowledge related to the specific subject taught, curricular knowledge, as well as pedagogical content knowledge. Content knowledge refers to the amount and structure of subject matter knowledge; curricular knowledge refers to the knowledge about the curriculum with which the teachers teach. He differentiates pedagogical content knowledge from general pedagogical knowledge that all subjects share. Pedagogical content knowledge connects subject matter knowledge but “goes beyond knowledge of subject matter” and represents “the dimension of subject matter knowledge for teaching” (p. 9). This study acknowledges possible sharing of conceptual and technical knowledge by teachers in the two countries when they interact. Meanwhile, this study leans towards a more personalized approach to teacher knowledge that underlies the RL project.

Connelly and Clandinin (1988; 1984) contend that what teachers know to teach actually goes beyond objective, conceptual, and scientific knowledge because teaching is a knowing action that is “both the expression and origin of the personal knowledge of the actor” (Connelly & Clandinin, 1984, p. 135). They conceptualize what teachers know as Personal Practical Knowledge (PPK) whose content is based on the convictions arising from the particular teacher’s experience - intimate, social and traditional – and it is emotional, moral, and aesthetic. They define that PPK is “for any one teacher, a particular way of reconstructing the past and the intentions of the future to deal with the exigencies of a present situation” (Connelly & Clandinin, 1988, p. 25). They emphasize that teachers’ PPK is actually expressed in educational actions and therefore can be only found in teachers’ practice. Moreover, these personal convictions and meanings may change as the person’s experience and circumstance change over time. To further conceptualize PPK that is contextualized in teachers’ life and professional experience both in and outside schools, Clandinin and Connelly (1995) introduce a metaphor of professional knowledge
landscapes that can help to capture the complex “intellectual, personal, and physical environment” where teachers work and develop their PPK (Connelly, Clandinin, & He, 1997).

The concept of PPK can help to understand teacher knowledge that originates in a teacher’s past experience and is reflected in his or her current and future practice. For Connelly and Clandinin, the best way to depict a teacher’s PPK placed on his or her professional knowledge landscape is the narrative of the teacher’s experience and practice. Within the story, they try to capture a range of telling parts that presumably form a “narrative unity” which they explain as “a thread or theme that runs through the narrative of experience” (Connelly & Clandinin, 1988, p. 75). These parts of the whole narrative include images, personal philosophy, rules, practical principles, rhythms, and metaphors that teachers may call out facing different situations (Connelly & Clandinin, 1988). Methodologically, Connelly and Clandinin (1988) discuss four techniques that can help teachers themselves reflect on PPK and hence help researchers to capture teachers’ PPK. The four techniques are storytelling, letter writing, teacher interviews, and participant observation. In the past two decades or so, Connelly, Clandinin, and their associates and followers, have been validating these techniques by exploring parts or whole pictures of teachers’ PPK. For example, Clandinin (1985) studied teachers’ classroom images; Clandinin and Connelly (1986) and Clandinin (1989) specifically looked at rhythms in teaching; Connelly et al. (1997) investigated a Chinese teacher’s aspects of PPK on her professional knowledge landscape; while Tsang (2004) looked into the development of pre-service teachers’ rules or maxims for practice.

Although the majority of the research related to PPK is done within one classroom setting or one school, the concept does hold the potential to spill over the walls of the school. Applying the concept in cross-cultural settings, it has been shown that personal practical knowledge, such as images and metaphors, can be meaningfully shared and created despite educators’ personal, social, and cultural differences (Xu & Stevens, 2005). Moreover, the four methods—storytelling, letter writing, teacher interviews, and participant observation (Clandinin & Connelly, 1988)—also suggest that teachers can actually express and share their PPK with researchers and other teachers. Therefore, there is a potential to see the sharing and developing of personal practical knowledge between teachers in different cultures and education systems when they have opportunities to talk with each other and observe each other’s practice. Actually, the knowledge
embedded in teachers’ personal and professional experience has attracted attention in the
networked PLC literature (e.g. Katz et al, 2008; Lieberman & Wood, 2003; Lieberman & Miller,
1999) in addition to conceptual and scientific teacher knowledge, which can be presumably
applied to the whole education system and probably any education systems around the world.
From my point of view, I believe that, as far as this study is concerned, in these essentially
teacher-led INPLCs created in the context of the RL project, both conceptual, scientific and
personal practical knowledge are possibly expressed, exchanged, and reshaped through
collaborative activities such conversation, observation, and joint work.

Cosmopolitan teacher professional identity

In a general sense, teacher professional identity can be defined as teachers’ perceptions of their
own roles and their perceptions of themselves as an occupational group (Beijaard, Meijer, &
Verloop, 2004). Sociologist Richard Jenkins contends that all human identities are social
identities; hence, he defines identity as “a practical accomplishment, a process” and suggests that
it is the result of a “dialectical interplay of processes of internal and external definition” (Jenkins,
2008, p. 46). Therefore, teacher professional identity is not fixed; and its formation is an ongoing
process that is influenced by both the teacher self and the context where the teacher works and
lives (Beijaard et al., 2004; Danielewicz, 2001). Moreover, by reviewing strands of research on
this topic, Beijaard et al. (2004) establish the point that teacher professional identity consists of
“sub-identities” and that the formation of professional identity requires teachers’ active
engagement in individual and collective professional learning. Obviously, this view of teacher
professional identity accords with the social learning theories that posit that people learn and
develop through participation in social settings. We shape and reshape “who we are and who we
become in the context of the communities to which we belong” as we participate in practice and
learning (Wenger, 1998). Indeed, it has been shown that teachers develop professional identity in
the school, for example, through reflective practice and professional development (Beck &
Kosnik, 2014); through reflective conversation with colleagues and experts (Cohen, 2010); or
through telling stories about their practice and the context (Connelly & Clandinin, 1999). Given
these understandings of teacher professional identity, it is fair to surmise that teachers’
participation in INPLCs might bring about changes in their professional identity.
The PLC literature provides evidence that teachers’ learning and practice experiences in professional communities shape teachers’ professional identity. For example, Little’s (2003) accounts of school-based learning communities show that teachers’ participation in talking about practice, sharing teaching artifacts, and interpreting shared classroom accounts shape how they think about themselves as teachers in collective terms. Lieberman and Wood’s (2003) observation in a national teachers’ writing community confirms the claim that participation in communities of practice bring about identity formation since engaging in professional leaning activities “shapes not only what we do, but also who we are” (Wenger, 1998, p. 4). As teachers participate in the social practices in professional communities they share and learn norms and purposes of the activities, develop a sense of belonging, and hence build and re-shape their professional identity (Chapman & Hadfield, 2010; Lieberman & Wood, 2003). Moreover, some features of networked PLC might grant teachers the sense of autonomy and ownership in a way that enhances their self-efficacy and empower them to become explorers of educational innovation (Veugelers, 2005; Day et al., 2002). Indeed, to learn and grow in PLCs, teachers have to “put their professional identities on the line, to admit they do not know everything, to expose their knowledge gaps to themselves and to their colleagues, and to reconstruct both their professional narratives and their professional identities” (Mitchell & Sackney, 2001).

In international school networks and INPLCs that can potentially bring about reciprocal learning, the ideals of cosmopolitanism and particularly cosmopolitan teacher identity are certainly applicable. UNESCO (1996) states that the idea of cosmopolitan identity becomes more and more important in the interconnected and unpredictably changing world. People should learn to live together by “developing an understanding of others and their history, traditions and spiritual values” and recognize “our growing interdependence and a common analysis of the rules and challenges of the future (UNESCO, 1996, p. 90)” . In education, Hargreaves, A. (2003) argues that teaching in the modern society and world must attend to “developing cosmopolitan identity and humanitarian responsibility at home as well as abroad” in addition to students’ academic achievement. Concerned about the negative impact of knowledge society and economic globalization on education and teaching, he suggests teachers be committed to continuous professional learning activities such as working with colleagues in temporary and long-term teams, participating in professional learning networks, and learning to teach in other contexts and countries. In the same vein, Luke (2004) echoes the point that under the new conditions of
economic and cultural globalization the social field of teaching and education needs to be redefined. He provides an inspiring new vision of a “transcultural and cosmopolitan teacher” who has

“the capacity to shunt between the local and the global, to explicate and engage with the broad flows of knowledge and information, technologies and populations, artefacts and practices that characterize the present historical moment. What is needed is a new community of teachers that could and would work, communicate, and exchange—physically and virtually—across national and regional boundaries with each other, with educational researchers, teacher educators, curriculum developers, and, indeed, senior educational bureaucrats.” (Luke, 2004, pp. 1438-1439).

These statements and visions on teachers’ cosmopolitan professional identity help the researcher to understand the underpinnings of teachers’ learning and actions in the Canada-China school network.

Summary

To summarize, the conceptual framework presents an idealized model of internationally networked professional learning community (INPLC) of educators. Underpinning the model is the idea of reciprocity that I have shown is essentially consistent with the concept of mutuality and is related to cosmopolitanism. The framework provides a tentative guideline for this inquiry; and it needs to be validated and modified in the light of participants’ insights. With a range of supportive organizational conditions in both schools and in the network, INPLCs between Canada and China are expected to be formed and a variety of collaborative learning activities are to occur in these communities. Reciprocal professional learning of educators as a process can be facilitated by these INPLCs characterized by several designing features of the international school network in the environment of the RL project, including equality of the two sides, an expectation of mutual learning and benefit, voluntarily based participation of schools and educators, and no imposed agenda external to these partnerships and communities. On the other hand, reciprocal learning is certainly an expected outcome of the collaborations and learning activities among educators from the two countries.
All the collaborations and learning activities are set to begin with dialogues between the two sides that are presumably able to spontaneously and reflectively relate to their teacher knowledge such as scientific, technical, and personal practical knowledge. Consequently, the ensuing actions of educators and their encounters with the environment within the school and the INPLCs might result in reflecting on and learning new knowledge, modification of professional identity, change of motivation, and perhaps practice change. It is anticipated that talks will be followed by actions either in one school in one country or jointly in more than one school in both countries. Thereby, the knowledge shared and created, the teacher identity shaped by interactions, and teachers’ motivation are reflected in and consolidated by real actions and educational practices that are influenced by the activities in the reciprocal learning space. In the particular context of Canada-China INPLCs, educators’ professional identity might be reshaped towards a cosmopolitan identity that enables them to access knowledge and skills and make contribution at the same time in a wider global educational arena. In the next chapter, I will discuss my methodological considerations that can operate the conceptual framework in the reality of school network in the context of the RL project. I will show how an exploratory research design and qualitative data can help understand these aforementioned concepts and the interrelations among them.
Chapter 5

Research Method

Following the previous chapter on the conceptual framework, I will discuss the methodological considerations and design of the study in this chapter. I will firstly show how an exploratory comparative study design fits into the context of the larger international partnership RL project and how the design can help understand the concepts in the conceptual framework of the study. The chapter will then proceed to describe aspects of the study design, including the selection of research sites and participants, the stages and methods of qualitative data collection, and the strategies of data analysis. At the end of this chapter, I will discuss the limitations and strengths of the study, as well as the ethical considerations.

An exploratory comparative study in reciprocal learning space

In order to understand the relatively new phenomenon of teacher learning in internationally networked professional learning communities (INPLCs), this study features two methodological considerations that guide the entire process of the inquiry. One, it is an exploratory study. This study explores the new phenomenon of international educators’ learning communities and the process, content, and impact of learning in those INPLCs. As a researcher, I position myself as an explorer who gathers knowledge and information in a long term and continuing approach that can substantively enhance understanding for the purpose of possible theory building (Stebbins, 2001). From my point of view, equally important are participants’ knowledge of their reality and conceptual, theoretical knowledge that is gleaned from similar past experiences as well as this inquiry. Therefore, the exploration starts with a tentative conceptual framework that is based on a substantive literature review after the researcher had worked with participants for two years. However, the exploratory inquiry is not confined by existing theories since the relatively new phenomenon of IN PLC has not been sufficiently studied. Actually, the scholarship that helps to build the conceptual framework is primarily from the research into school networks and networked PLCs within national education systems. Therefore, this exploratory study intends to modify, specify, and extend the proposed framework in a way that it can sufficiently reflect the
particularities of INPLCs between Canada and China in light of participants’ knowledge. To this end, qualitative data, including interviews and records of interactions between the two groups of educators, were collected and analyzed, as I will be elaborating later in this chapter.

Two, this study is also a comparative study that features the consideration of spatiality against the backdrop of globalization. In the comparative education literature, there is a relatively new comparative lens that is characterized by a relational understanding of space (Larsen & Beech, 2014). The new lens shifts the focus of analysis from traditional geographic entities to the connections and interactions between schools and educators from different education systems and sociocultural realities (Larsen & Beech, 2014; Carney, 2009). Researchers can investigate similarities, differences, mutual benefits, as well as contradictions and inconsistencies associated with these connections and interactions between these involved education systems, schools, or educators (Carney, 2009). This approach of comparative research differs from the traditional type that mainly focuses on how and what one country learns from the other(s) without addressing the process and impact of interactions between the education systems of two or more countries (Lewis, Sellar, & Lingard, 2015). While social network analysis (Larsen & Beech, 2014) and topological relations (Lewis et al, 2015) have been proposed or applied to examine connections and interactions of people and organizations mainly concerning the government or policy level, this study tends to employ this new lens of comparative education in a more conceptual way in order to understand practitioners’ connections and interactions in the reciprocal learning space between two countries.

In the context of the RL project, Connelly and Xu (2015) argue that mutual learning between the two countries and education systems should go beyond mere comparison of aspects of education since in the project participating educators from different cultures and experiences “come together over common issues and learnings and search for ways to move forward”. From a teacher community point of view, these participating educators, as well as their schools, formed INPLCs with the facilitation and mediation provided by the project. It is these INPLCs altogether that constitute the reciprocal learning space on education between the two countries and education systems. More precisely, what calls the researcher’s attention is teachers’ collaborative activities in the reciprocal learning space. Unlike those higher level policy borrowing and lending international networks, the space in this study enables classroom teachers to be
connected through collaborative activities that are close to their practice. What flows in the space is practitioners’ knowledge while educators participate in dialogues, exchanges of teaching materials, and joint educational activities. Moreover, educators’ reflections shared with the researcher also link back to these activities occurring in the common, connected reciprocal learning space between the two distant places. Therefore, methodologically speaking, these collaborative activities constitute the actual space since they protrude from geographically remote places while still linking to the local places. It is these accounts of activities, connections and interactions associated with these activities, and teachers’ actions and reflections prompted by the reciprocal learning space that enable the researcher to investigate and compare.

In summary, the existence and development of INPLCs between Chinese and Canadian schools and educators provide an ideal research venue in which the researcher can explore the relatively new phenomenon of teacher cross-cultural reciprocal professional learning. This exploration is also informed by a new lens of comparative education featuring the thinking of relational and generative characteristics of space in the globalized world. The reciprocal learning space between Ontario and Shanghai schools not only facilitates teachers’ collaboration and learning but also enables research. Between the two methodological considerations, however, the main concern of this study is to explore how these Canada-China teacher professional communities work, whereas the comparison between participants’ experiences and views enabled by the reciprocal learning space seems inevitable owing to the cross-national, cross-cultural research setting. The processes of data collection and analysis that reflect the two methodological considerations will be explained as following.

**Participants**

In line with these methodological considerations, the study will include both Canadian and Chinese schools and educators. Eight schools in the two countries formed four pairs of sister schools between Ontario, Canada and Shanghai, China. Four public schools in Ontario were involved in the RL project and the associated Canada-China sister school network in the first two years, with two being elementary schools and the other two secondary schools. While the four Canadian schools belong to one large Ontario public School Board (SB), the locations and student demographics are quite different. The secondary school in School Pair 1 is located in an
affluent community where the residents are mostly Caucasian descendants; the secondary school in School Pair 2 lies in a culturally diverse community with most of its students from Asia, Africa, and the Middle East. Many of these students’ families are poor. In terms of student achievement, the secondary school in Pair 1 seems much stronger than the one in Pair 2 according to recent EQAO results. In School Pair 3, the Canadian elementary school is located adjacent to the China Town in the downtown of the city and understandably a high proportion of its students are Chinese descendants. The community where the school operates is worn down and economically in poor shape. By contrast, the elementary school in Pair 4 lies in a newly developed suburban area where many large homes were built. Majority residents in this community are Chinese immigrants, some of them are recent immigrants. Academically, according to recent EQAO results, the elementary school in Pair 4 is obviously a well-performing school and much stronger than the one in Pair 3.

On the Chinese side, there are also four partnering schools involved, including two secondary and two elementary schools. All of them are public schools with three of them under the jurisdiction of one same Education Bureau (EB) and the other secondary school belongs to another EB, which can be regarded as on an equivalent level as the SB in Ontario. The Chinese secondary school in Pair 1 is an ordinary community high school as opposed to the category of Experimental Model High Schools, to which the secondary school in Pair 2 proudly belongs. The secondary school in Pair 1 is located in a not well-off urban area and most of its students are recruited in the community. Academically, the school is at the lower tier of all Shanghai high schools and many students in the school struggle to get into universities. By contrast, the secondary school in Pair 2 is ranked the first place in the suburban district in the south of Shanghai. As one of only two Experimental Model High Schools in the district, it enjoys the privilege to recruit students across the city although most of its students still come from within the district. The student achievement of the school is also outstanding comparing to many other Shanghai secondary schools. In Pair 3, the Chinese elementary school is located in a satellite town in Shanghai, which used to be a heavy industrial center of the city in the last century but now lost its status due to the restructuring of Shanghai’s economy. Most people who are living in the community around the school are those who either have not been able to find better opportunities or who are migrants from other under developed parts of China. Contrastingly different is the community where the other Chinese elementary school lies. The other elementary
school in Pair 4 operates in a new, affluent residential area with a high and growing real estate price. Most parents who send their kids to the school are well-educated and well-off financially.

In these four sister school pairs, Ontario and Shanghai teachers and principals have been engaged in collaborative activities since late 2013 and continued their collaboration in these INPLCs as of the time when I collected the data for this study. Two teacher communities (Pair 1 and Pair 2) are comprised of teachers from secondary schools in the two places while the other two (Pair 3 and Pair 4) are formed by elementary school teacher participants. As a Research Assistants (RA), alongside other RAs of the RL project, I have facilitated teachers’ communication and activities in these INPLCs. The principal of each school in the partnerships is involved too in one way or another. Several of these principals have directly engaged in collaborative activities as educators themselves while others take a supportive role in the background. 39 active participants in total, including both teachers and principals, from the two countries have been involved in these INPLCs since September, 2013 or later depending on the progress of each partnership. Those who were briefly involved in (such as taking part in only one videoconference) or who were not active participants at the time of data collection were not included in this study. In School Pair 1, there are three teachers and two principals; in Pair 2, there are thirteen teachers participating in different subject groups alongside one Canadian principal, one Chinese principal, and two Chinese vice principals; in Pair 3, there are seven teachers and two principals; and in Pair 4, there are six teachers and two principals. Since the total number of participants is not large, the study managed to include all the active teacher and principal participants of these INPLCs between Ontario and Shanghai schools. Appendix A presents more detailed information about participants.

Data collection

The data collection of this study is comprised of two stages. The first stage data collection was conducted for the research needs of the large RL project. Over the first two project years, other RAs of the RL project and I collected qualitative data that documented the process of building each school partnership and collaborative activities between schools and teachers in the process. I and another RA, YK, took the main responsibility of tracking and documenting the development of each school partnership. I followed all the communication and activities between
the two secondary school pairs in the first two years and onwards while YK followed the two elementary school pairs in the same manner. The main responsibilities of RAs of the RL project are to support and maintain communications and collaborations between each school pair and to coordinate and facilitate videoconferences between educators. As teachers and principals from the two sides regularly participated in Skype meetings, collaborative teaching and learning activities, email correspondences, and exchanges of teaching and learning material, RAs documented all the processes, collected all the artefacts, including items such as meeting minutes and exchanged materials, and reported all to the project directors. The actual time duration of data collection in each school pair was varied due to the different formal starting date of each pair. Appendix B shows these different dates as well as end or pause dates.

There are two types of meetings—namely Project Meetings and Sister School Meetings. Project Meetings are between the research team (mostly RAs) and participants from schools in one country; this type of meetings mainly serves the purposes of partnership planning and delivering information from one school to the other. Some important correspondences prior to or after these Project Meetings were also documented. Sister School Meetings refer to these videoconferences or in some cases phone conferences between schools during which participants in the two countries talked to each other directly. During Sister School Meetings teachers and principals exchanged information about their schools and education and sometimes planned and summarized ongoing collaborative activities. All the Project and Sister School Meetings were audio taped, transcribed, and translated when necessary into English by RAs. At the same time, RAs wrote observational and reflective field notes (Clandinin & Connelly, 2000) for these meetings as well as collaborative activities. These multiple techniques of data collection helped the researcher to gather as much information as possible for the purpose of exploration (Stebbins, 2001). These field notes greatly enhanced my understanding of participants, participating schools, and the development of the school partnerships and collaborative activities. This particular study used the aforementioned data collected in the first stage as supplementary data in a way that only some of them were consulted when needed. The data collection for the RL project continues since the larger project will last until the year of 2020; however, this study only refers to the data of the RL project during the first two project years (from September, 2013 to October, 2015).
The second stage of data collection involved interviews with all the 39 active teacher and principal participants in the two countries. The interview data were collected specifically for the need of this particular study. I used “standardized open-ended” interviews in order to effectively explore in-depth information; and an interview protocol that I prepared in advance was used across all participants for the purpose of consistency (Johnson & Turner, 2003). The interview questions were designed by referring to a broader interview guideline of the RL project and informed by an interview protocol that was used by the two principal investigators of the RL project (Connelly & Xu, 2009). The interview protocol for participating principals is a slightly modified version of that for teachers due to principals’ different leadership role in the process of relationship building and teacher learning. The interviews focus on questions such as what educators perceive themselves and their partners from a different country can learn from each other, what impact they perceive from the experience on their knowledge and practice, and what factors support or inhibit the development and their learning in international teacher communities. Some of the RAs of the project were interviewed by the researcher too at the end of the second project year; however, this part of data is only used for triangulation purpose and not included in the main data analysis. The interview protocols of teachers and principals are attached as Appendix C and Appendix D.

The process of interviewing all participants in the Canada-China sister school partnership started on May 22, 2015 and was completed on October 15, 2015. All the Shanghai interviews were conducted in May and June, 2015 while all the Ontario interviews were conducted between the end of August and October, 2015. All the Shanghai interviews were conducted at the schools where the participants were currently working at that time. The locations of interviews were either offices or conference rooms in those schools. Interview rooms were usually chosen by the teachers or the principals. Most of the Ontario interviews were also conducted at participants’ schools, either in offices, classrooms, or conference rooms in these schools. Three Ontario interview were conducted outside the schools. Among them, one interview was conducted in a restaurant at the participant’s request while the other two took place in the RL project office in the University of Toronto because the two participants offered to come to the office at their convenience.
The majority of the interviews were individual interviews; however, a few of them were group interviews of two teachers because of participants’ special requests. This situation occurred because these pairs of teachers usually participated in all the sister school activities together and they wished to share their experience together as well. Later, one additional copy of each group interview transcription was created so as to analyze each participant’s response separately. Usually, each interview lasted 30 to 40 minutes long with one exception that lasted 1.5 hours. The longest interview was jointly conducted between the researcher and another RA, YK, who has been facilitating the participant’s sister school activities. All the interviews with Chinese teachers were conducted in Mandarin Chinese while all the interviews with Canadian participants were done in English. All the interviews were audio taped given participants’ written or oral consent. All interviews were transcribed verbatim and translated into English in the case of the Chinese interviews. An overview of the main links between the data sources collected in the two stages and research questions are illustrated below in Figure 2.

Figure 2: Research questions and data sources
Data analysis

This exploratory study has sought to identify learning activities that facilitate knowledge sharing in internationally networked teacher professional learning communities, to examine organizational conditions for building these communities, and to reveal the relationships between the conditions and the influences of the learning experience on teacher participants. The literature has provided some insights related to these research objectives; however, the existent knowledge is not sufficient to explain the relatively new phenomenon of teacher INPLCs, particularly when the special context of Chinese and Canadian education is taken into account. Moreover, the researcher takes a stance that participants’ knowledge that ties with their experience and the context is as important as theoretical knowledge offered by educational researchers. Therefore, the data analysis of the study employed a general inductive approach that seeks to summarize the raw data collected from the participant and identify concepts and themes through interpretations made from the data (Thomas, 2006). At the same time, the inductive analytical process is supplemented by the themes of the topic that have suggested by the literature (Harding, 2006; Charmaz, 2006). Based on these understandings, the data analysis started with an initial code list which was subject to change as the analysis proceeded in the light of the information from the empirical data.

The actual analysis process started with a reading of all the interview transcripts after the data were imported into a computer program Atlas.ti 7. The first reading of the data helped me recollect the thoughts that I had during the interviews and develop some intuitive ideas that could be further confirmed in the following step of coding. Subsequently, I created an initial code list that was informed by the first reading and by the knowledge gleaned from the literature. These 35 initial codes in the list were just roughly grouped according to the concepts proposed in the conceptual framework, namely reciprocity, organizational conditions, teacher knowledge, motivation, practice, and cosmopolitan professional identity without being clearly defined at the beginning. The initial list was imported into the computer program on September 23, 2015. Then, I read all the interview transcripts line by line again to discover “patterns and contrasts” (Charmaz, 2006, p. 55) across individual teachers, school pairs, and countries. Once a sentence or a short paragraph was interpreted as matching the definition of a certain code it was assigned
to the code. The code can be a predetermined code in the initial code book or an emerging new code according to the meanings of the sentence or the paragraph. As a result, I kept modifying the code list and defining and redefining codes in the light of emerging thoughts and themes identified from the interview data. For instance, the initial theme “Conditions” was modified into “Organizational Conditions” while two themes—sources of motivation and change of motivation—emerged related to the concept of teacher motivation. Only when approaching the end of coding process were the code list and definitions of codes determined. Appendix E and Appendix F show the initial code list and the final code list with code definitions.

The main data analysis focused on teachers’ and principals’ interview data since the interview transcripts are the primary data of the study. The other sources of data, including some Project Meetings, Project Communication, and Sister School Meetings were consulted only when I needed supplementary information. For example, sometimes I need additional information about a certain sister school activity or a certain videoconference; or some correspondence and Project Meeting records could provide additional information about participants’ opinions. The main coding process was completed in November, 2015; however, minor modifications of codes and quotes and additional information searching from other sources of data still took place as I continued to analyze the data for writing up. In the whole process, two journals were created. One captures all the changes and modifications of codes, their definitions, as well as the reasons for these changes; the other is a writing journal that documents emerging thoughts as I read, interpreted, coded, and synthesized the data. The results of the coding as well as these journals helped me reduce the amount of data, organize the information in the data, and hence helped me gain deeper understanding about these INPLCs informed by both existing theories and participants’ insights.

Some useful functionalities of the computer program Atlas.ti 7 such as coding, recoding, decoding, merging, grouping, and creating super codes greatly streamlined the analysis, categorizing, sorting, and comparing processes. The computer program assisted me to apply constant comparative method (Corbin & Strauss, 2008; Charmaz, 2000) at different coding stages and for different sources of the data (Boeije, 2002). The interview transcripts of participants were grouped in the computer program by roles (teacher or principal), schools, school levels (elementary or secondary), and by countries (Canadian or Chinese) for comparative
purposes. After coding, the computer program allowed me to sort the coded data or identified themes that belong to any one of the above groups or all participants. With the aggregated information being available, one Excel table—Teacher Analysis Table—was created and filled in order to make more substantive comparisons (Miles & Huberman, 1994). In order to recapture the vibe of interactions in the reciprocal learning space, the participants were grouped according to the activities in which they participated in the Teacher Analysis Table. The entries in each row summarize the main themes and some related short quotes of each teacher. Appendix G shows an excerpt of the Teacher Analysis Table. As such, the analysis tools of the computer program and the comparative Teacher Analysis Table helped not only operationalize the methodological lens that is the comparative education in the reciprocal learning space but also apply the constant comparative method in a hope of forming a theory grounded in the data (Corbin & Strauss, 2008).

Given the inductive analysis approach and constant comparative method described above, the analysis then sought to discover a model that can explain the links among identified themes including those related to organizational conditions and those related to teachers. Although an exploratory study like this one could end with inconclusive and vague outcomes due to the nature of exploration (Davies, 2006), a tentative theory grounded in the collected qualitative data is still possible (Saldana, 2009). The coding and subsequent analysis processes had deliberately sought to identify similarities, differences, and relationships about what happened in these INPLCs; as a result, the findings of this study led to a model for the teacher INPLC that is modified from the proposed conceptual framework using the Canada-China sister school network as a case in point. The suggested model that seeks to explain the processes, content, impact, and conditions of teacher reciprocal learning in INPLCs will be presented and discussed in detail in Chapter 9.

Objectivity

I had a complicated role in the RL project. On the one hand, I was a facilitator and mediator for teachers’ cross-cultural collaboration; on the other hand, I was a researcher who was supposed to observe and document the process of teachers’ interactions objectively. Professor Connelly, who is one of the two project directors, taught me how to maintain a relatively objective position during the process; and I maintained the position and implemented the practice he required
throughout my work on the project and on my own study. Basically, Professor Connelly urged us RAIs not to offer any opinions, suggestions, and interventions to these educators when they strived to establish school partnerships. Rather, these schools and teachers were encouraged to make up and negotiate their own collaboration plans. To put it simply, we researchers only supported what the schools decided to do. Following Professor Connelly’s instructions, I did reflect on those meeting summaries and field notes according to my personal knowledge and opinions; however, these reflections only happened when I reported to the Professor in writing after those school visits and these documents had not been given back to the participants. In retrospect, however, I realized that these reflections might have influenced how I continued to facilitate teachers’ collaborative activities. Also, my enthusiasm for cross-cultural professional learning, my belief in reciprocal learning, as I discussed in Chapter 1, and my proactive support for teachers’ collaboration might have influenced Canadian and Chinese teachers’ learning experiences and their attitude towards the new school network.

I strived to maintain objectivity when I analyzed the data and when I interpreted the findings. Firstly, I used an inductive method to unpack participants’ thoughts and opinions. The strict and systematic coding process that I employed assured the credibility of the findings. Secondly, I collected and referred to multiple data sources, including teachers’ interviews, principals’ interviews, Project meetings, Sister school meetings, as well as RAIs’ interviews. These multiple data sources triangulated or sometimes complemented each other. Thirdly, I also examined and reported both positive and negative cases related to the main themes that emerged from the data. These counter examples not only demonstrated my effort to maintain objectivity but also reflected the authenticity of the story that the study presented. Finally, I kept a critical eye on what was happening in the Canada-China sister school network. The critical angle was conceptually built into the study design that included the examination of organizational conditions. Over the two years of working with the participants before I interviewed them, I had observed many ups and downs within these school partnerships. Thus, I had no reason to overly cheer for any progresses and achievements that teachers made in terms of their collaboration and learning. Rather, I was open to all kinds of positive or negative opinions and feedbacks offered by the participants in a hope of fully understanding and hence improving the Canada-China school network.
Limitations and strengths of the study design

The first limitation of this study is that the participants constitute a convenience sample for this particular study since they have been already involved in the larger RL project voluntarily. Although this study has included all available participants during its two-year time frame, the limitation of the sample may affect the generalizability of the findings in two ways depending on different understandings of the population. Firstly, the participants of the study might not be representative of the teacher populations in Ontario and Shanghai, let alone the teacher populations in the two countries, given these participants’ special attributes. For example, these participants come from certain grade levels and certain subject areas in certain schools with special characteristics that I described above. To some extent, their views might only be representative of those who are in similar educational situations and with similar experiences of international exchange. Secondly, as the RL project continues and the Canada-China sister school network develops, the population of participants of the larger project will grow and change. Consequently, the convenience sample of this early study might not be representative of the educators who will potentially participate from different cities in Canada and China in the future. Both countries are large and have many cities and regions with diverse cultures, ethnicities, and economic development status that will probably influence educators’ learning experience greatly. At most, the sample of this study only offers a special case as to the changing population of the RL project. In addition, the sample size for each country is not sufficiently large—there are 14 teacher and principal participants in these Canadian sites while 25 educators in these Chinese sites. Therefore, it is definitely not the researcher’s intention to generalize the results of the study in a way that compares teachers in the two countries or provides claims applicable to all the places that will be involved in the RL project. It relies on the readers’ discretion to decide how and where to apply the findings given the detailed contextual information that I provided in the current study.

The second limitation of the study has to do with the time when the investigation was conducted. The RL project is a longitudinal study that will not end until the year of 2020, and the sister school network and these teacher INPLCs will evolve as time goes by. However, the data that the study collected and analyzed are mainly from the first two years of the RL project when the
school network and these associated teacher INPLCs are rudimentary. Therefore, the findings of this study are tentative and non-conclusive as to the larger RL project. Some findings of the particular study might be proven to be incomplete or inaccurate as the project continues, as schools further develop their partnerships and the network, and as teachers deepen their reciprocal learning. All in all, the study only seeks to describe and analyze the early development of the Ontario-Shanghai sister school network and hence provides researchers and practitioners with knowledge and suggestions as to the early formation of teacher INPLCs and teachers’ cross-cultural professional learning in these nascent communities.

To improve the validity of the study, several measures were implemented. First, the interview protocols were developed by referring to an interview guideline of the larger RL project as well as a protocol used in an earlier similar sister school project. This approach to instrument development ensures the consistency and hence reliability of the data in terms of both the particular study and the larger project. Second, the longitudinal RL project allowed the researcher to work with participants for a relatively long time and to continue working with participants while composing the thesis. This type of ongoing contact and observation with participants has enabled the researcher to understand and interpret participants’ meanings correctly and accurately. Third, multiple sources of data were used in this study in a way that enhances understanding and provides a complete picture. Different sources of data can corroborate each other during data analysis to ensure the consistency of findings. Moreover, some RAs were interviewed and their insights were used for the triangulation purpose as well; no significant contradiction has been identified by comparing RAs’ perspective and the primary data source of the study. In addition, the design and some findings of the study were presented at the third Annual Public Conference and General Meeting of the RL project in April 2016. As well, the two directors were informed about the methods and findings of the study. No problems were pointed out by them in terms of the research methods and findings.

**Ethical considerations**

This study is contextualized in a large partnership project whose ethical approval has been granted by the Research Ethical Board (REB) of Social Sciences, Humanities and Education of the University of Toronto (PROTOCOL REFERENCE # 30042) and the REBs of the University
of Windsor PROTOCOL REFERENCE # 13-196 B). The data collection, including the first stage of collection by the researcher and other RAs of the project and the second stage by the researcher independently, has been conducted under the coverage of the above two ethical protocols and their annual renewals. Like the large project, the study should be considered as having no risks greater than minimal risks to participants due to the following reasons: there are no pre-existing vulnerabilities associated with participants who are competent adults; the data collection of the study contains no deception or biomedical elements; there are no possible physical, social or legal risks associated with the study; I did not make any evaluation of the participants while conducting interviews; and I did my best to make the research a positive experience for the participants to share their knowledge and insights on professional learning in international teacher communities.

All interview participants are participants of the large partnership project and the project has obtained the consent for their participation in the study. Once an individual teacher and principal agreed to participate in the interview of the study, he or she were asked to read and sign one consent form for the interview. The consent form is a slightly modified version from the approved interview consent form of the larger RL project. Appendix H shows the Consent Form for Interview. On the consent form, participants were informed of the purpose of the RL project and the study, the procedure of the study, and the use of the data. Also, they were informed that they were free to withdraw at any time from the study and they are free to request that the recording be stopped. No participants withdrew from the study. With regard to the data that were collected for the larger RL project and that were used for the particular study, a previous consent form for observation of the RL project has informed the participants that the data would be used in studies associated with the project. While all Canadian participants provided signed consent forms for the individual interviews, Chinese teachers and principals preferred to receive information and give their consent orally. Therefore, for each Chinese participant I audio recorded the process of oral informed consent.

Any information that is obtained in connection with this study and that can be identified with a participant will remain confidential and will not be disclosed to a third party. Due to the fact that the researcher has constant contact with participants, anonymity cannot be achieved during the process of data collection. However, the researcher has ensured anonymity in transcripts, data
analysis, and research reports by using pseudonyms, so that participants’ real identities will not be revealed. All the data collected in the first stage will be stored in the project computer with password protection in the project office, while the digital interview audio data in the second stage and the associated transcripts will be stored on the researcher’s computer with a password protection. Only the researcher, my supervisory committee members, and the two directors of the RL project will have access to the data. All forms of the data have been stored either on password-protected computer or in the locked cabinet in the project office. The data collected in the first stage will be kept until the completion of the RL project and will be used in subsequent studies of the SSHRC Partnership. However, the interview data collected specifically for the study will only be use for this study and its related publications and will be destroyed after the end of the RL project in 2020.

There was no direct benefit for participants besides the learning experience. The participation in the developing school network between China and Canada broadened teachers’ horizons as educators and connected teachers from both sides with practices and ideas from a different education system and culture. Teachers’ learning about new practices, new ideas, and cultural and intercultural knowledge will be valuable for their schools and classrooms. In terms of interviews of the study, participants have an opportunity to share and reflect on their cross-cultural interactive learning experiences and identify the strengths of both school systems that can be useful in their own classrooms or schools. Moreover, all participants will be provided with a summary of the findings of the study once I defend this thesis in the expectation that educators can apply the knowledge that I learned in their future professional learning activities. The next three chapters will present findings of the study alongside some data examples that support these findings.
Chapter 6

Collaborative activities as reciprocal learning space

The conceptualization of reciprocal learning in the context of RL project emphasizes the learning for mutual benefits that is situated in educators’ cross-cultural collaboration. Thus, this chapter describes the collaborative activities that have taken place in the reciprocal learning space between the participating Ontario and Shanghai schools. It also reports teachers’ experiences of mutual learning given these collaborative activities. This chapter draws on multiple data sources including teacher and principal interviews, Project Meetings between researchers and schools, Sister School Meetings, and some available Project Communication records. The teacher and principal interviews are the primary data while other sources of data provide supplementary information about how these school partnerships evolve and teacher reciprocal professional learning take place. I firstly provide a summary of thematic collaborative activities in each pair of sister schools. The summary highlights some features of these activities including organization, main contents, participants, duration, and outcomes. These descriptions of thematic activities are followed by a summary of videoconferences between schools. These videoconferences complement thematic activities as the second type of collaborative professional activities involving educators in these INPLCs. Subsequently, main characteristics of collaborative activities in the reciprocal learning space will be discussed. Finally, this chapter ends with a section that describes Chinese and Canadian participants’ overall experiences of cross-cultural collaboration and professional learning.

Reciprocal learning activities

Thematic activities

Since teachers and principals started their interactions, there have been an array of collaborative activities happened in each pair of schools. The following Table 1 presents an overview of these collaborations grouped by school pair. In the table, the activities are presented in a temporal order if they did take place at different times. The number of main teacher participants in each school and student involvement are also shown in the table. Principals’ and/or vice principals’ participation are not reported in the table, although their presence, support, and sometimes direct
participation are important for the development of these thematic activities that connect schools. Principals’ perceptions and opinions will be reported in some sections in this thesis as appropriate. The table also summarizes the main characteristics and outcomes of these collaborations. A start and end time of each activity is provided too; however, some activities are ongoing without an end time. The passages following Table 1 describe these activities between each pair of schools except that the main characteristics of thematic activities will be discussed in the next separate section.

**Table 1 Thematic Activities between Sister Schools**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Teacher participants</th>
<th>Student involvement</th>
<th>Main Characteristics</th>
<th>Start Time</th>
<th>End time</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School Pair 1</strong></td>
<td>3 ET; 1 CT</td>
<td></td>
<td></td>
<td>Mar. 2014</td>
<td>Feb. 2015</td>
<td><strong>Exchanged program designs and special curriculum</strong></td>
</tr>
<tr>
<td>(Secondary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Planning Student exchange program</strong></td>
<td>3 ET</td>
<td>Yes</td>
<td>Joint work; extra-curriculum; school level</td>
<td>Mar. 2014</td>
<td>Feb. 2015</td>
<td><strong>Exchanged program designs and special curriculum</strong></td>
</tr>
<tr>
<td><strong>Teacher joint study</strong></td>
<td>1 CT and 1 ET</td>
<td>Yes (planned)</td>
<td>Joint work; curriculum related; teacher level</td>
<td>Feb. 2015</td>
<td>Jun. 2015</td>
<td><strong>Shared summary of technology development of the school; discussed study design</strong></td>
</tr>
<tr>
<td><strong>School Pair 2</strong></td>
<td>5 ET; 8 CT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Secondary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Student survey project</strong></td>
<td>1CT and 1 ET</td>
<td>Yes</td>
<td>Aid and assistance; curriculum related; class</td>
<td>Apr. 2014</td>
<td>Jun. 2014</td>
<td><strong>Canadian students designed the survey, Chinese students filled the</strong></td>
</tr>
<tr>
<td>Sharing Physics teaching</td>
<td>2CT and 1ET</td>
<td>Yes (one side)</td>
<td>Sharing ideas, materials and methods; curriculum related; teacher level</td>
<td>Oct. 2014</td>
<td>Jun. 2015</td>
<td>Shared curriculum content, teaching video</td>
</tr>
<tr>
<td>------------------------</td>
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<td>------------------------------------------</td>
</tr>
<tr>
<td>Sharing History teaching</td>
<td>2CT and 1ET</td>
<td>Yes (one side)</td>
<td>Sharing ideas, materials and methods; curriculum related; teacher level</td>
<td>Oct. 2014</td>
<td>Jun. 2015</td>
<td>Shared teaching materials such as curriculum content, teaching materials, student assessment, teaching video</td>
</tr>
<tr>
<td>AP math Extended Course</td>
<td>2CT and 2ET</td>
<td>Yes</td>
<td>Aid and assistance; curriculum related; class level</td>
<td>Apr. 2014</td>
<td>Jun. 2015</td>
<td>Shared text book, syllabus, and teaching video</td>
</tr>
<tr>
<td>Sharing TI calculator teaching</td>
<td>1CT and 2ET</td>
<td>Yes</td>
<td>Joint work; curriculum related; class level</td>
<td>Apr. 2014</td>
<td>Ongoing</td>
<td>Shared teaching video and student work</td>
</tr>
<tr>
<td>Eco-school project</td>
<td>1CT and 1ET</td>
<td>Yes</td>
<td>Joint work; extra-curriculum,</td>
<td>Jun. 2015</td>
<td>Ongoing</td>
<td>Shared ideas and past work of green school</td>
</tr>
<tr>
<td>School Pair 3 (Elementary)</td>
<td>1 ET; 5 CT</td>
<td>student club level</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sharing math teaching</strong></td>
<td>2CT and 1ET</td>
<td>Yes</td>
<td>Aid and assistance; curriculum related; class level</td>
<td>Sep. 2014</td>
<td>Dec. 2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chinese side shared Tangram curriculum and teaching records, Canadian side practiced the teaching and then shared teaching notes afterwards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Education Project</strong></td>
<td>2 CT and 1ET</td>
<td>Yes</td>
<td>Joint work; curriculum related; class level</td>
<td>Jan. 2015</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chinese side shared water education curriculum and materials, Canadian side was inspired and practiced water education activities, the project then evolved to be joint work on water education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Pair 4 (Elementary)</td>
<td>2 ET; 4 CT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pen pal letter</strong></td>
<td>4 CT and 2 ET</td>
<td>Yes</td>
<td>Joint work; curriculum related; class</td>
<td>Jun. 2014</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shared student pen pal letters</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Between March 2014 and June 2015, there were thirteen main collaborative activities in total that occurred in the four pairs of sister schools. In each pair, there were two to six activities that involved teachers, principals, and students in most cases. In School Pair 1, the two secondary schools jointly planned a student in-person exchange program over one year starting from March, 2014 (Sister School Meeting minutes, March 15, 2014) by directly involving both principals and three Canadian teachers. Actually, the two principals led most of their conversations during the meetings while teachers offered suggestions, provided materials as needed for the program planning, and recruited students at the end. This student exchange program was not launched successfully due to insufficient students’ turn-out number in either side of the Pair. During the process, however, the two schools exchanged a lot of information including the school organization, curriculum, and the exchange program designs. Following these fruitless efforts, one Canadian computer science teacher who participated in the student exchange program planning initiated a joint comparative study partnering with one computer science teacher in the

<table>
<thead>
<tr>
<th>Activity</th>
<th>Participants</th>
<th>Joint Work</th>
<th>Curriculum Related</th>
<th>Date</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movie commentary</td>
<td>4 CT and 2 ET</td>
<td>Yes</td>
<td>Joint work;</td>
<td>Apr. 2015</td>
<td>Jun. 2015</td>
<td>Both sides watched the same movie, students wrote commentaries, shared the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>curriculum related; class level</td>
<td></td>
<td></td>
<td>commentaries, and follow up discussion</td>
</tr>
<tr>
<td>Sharing student work</td>
<td>1 CT and 2 ET</td>
<td>Yes</td>
<td>Sharing materials (student work); curriculum related; school level</td>
<td>Jun. 2014</td>
<td>Ongoing</td>
<td>Shared students' art work</td>
</tr>
</tbody>
</table>
Chinese sister school. They planned to investigate and compare the two schools’ use of technology in teaching and learning. Unfortunately, this project turned out to be short-lived because the Chinese teacher lost interest after a few times of discussion about the study design. Students would have been a part of the joint study if it had been conducted. The partnership of School Pair 1 was also ended by October 2015 in part because the Chinese principal and teacher lost interest to continue the partnership after the two failed attempts.

School Pair 2, the other secondary school pair, embarked on more activities and involved more teachers than Pair 1. Also, Pair 2 took a very different approach than Pair 1 in terms of the content of the partnership. Starting in April 2014, Pair 2 mainly focused on curricular teaching and learning at first. The involved subject areas included Psychology, Physics, History, and Mathematics with eight Chinese teachers and five Canadian teachers participating in these subject activities. The teachers of these subject areas shared their curricula, teaching materials and methods, student assessment methods, and in some cases classroom teaching video clips. It was only recently that the two schools came up with an extra-curricular project involving an environmental student group in each school. Students were involved in all of these activities in one way or another, such as providing student work, participating in classroom teaching and learning for video tapings, or directly involved in videoconferences under teachers’ supervision. Unlike the principals’ direct involvement in the Pair 1, the two principals of Pair 2 took an auxiliary position. They only attended major planning meetings at the beginning or at turning points of the partnership. For the Chinese school, the principal appointed one vice principal to be fully responsible for the coordination of project while another vice principal was also involved at some times. Although all the six activities were expected to be long term collaborations, four of them stopped due to different reasons such as participating teachers’ leave from the school or teachers’ loss of interest. Only two of them will potentially continue; however, the two activities were temporarily interrupted by a teacher strike in Ontario secondary schools starting in November, 2015. The two principals expressed their willingness to continue the two activities once the teacher strike is over (Sister School Meeting minutes, November 30, 2015).

There are two elementary sister school pairs. Pair 3 is the longest partnership that started exchanges in October, 2013 (Sister School meeting minutes, October 10, 2013), comparing to the other three pairs. However, it took the principals and teachers in the two schools a fairly long
time to figure out a common interest on which to collaborate. Actually, concrete collaborative activities only occurred in the second project year whereas principals and teachers merely exchanged general information of the schools and some ideas of collaboration in the first year. From September 2014, thanks to one Canadian teacher’s initiative, two real collaborations linking to teaching and learning in the two schools started to take shape (Sister School meeting minutes, September 17, 2014). Tied with her classroom teaching, the Canadian teacher firstly adopted and adapted one Tangram syllabus that was shared by two math teachers in the sister school. Later, she again borrowed the idea and practice of water science education shared by one science teacher in the Chinese sister school. She then designed and implemented a full unit of curriculum on water education with her Canadian class. The Canadian teacher was the only teacher who participated in these activities whereas five Chinese teachers were involved at different times including one on-site teacher coordinator. It was only at the end of the second project year that another Canadian teacher, who is not included in this study for her limited participation, started getting involved in the sister school partnership. The two principals, as well as the two vice principals of the two schools, only took an auxiliary position. The Chinese principal actually appointed one curriculum leader as the on-site coordinator to be responsible for the sister school project. Students in both schools were involved. For the Canadian classroom, students were direct participants of their teacher’s teaching and then they shared their learning process and outcomes with the sister school. For Chinese students, they indirectly participated through their teachers’ sharing classroom teaching and learning. The sharing of math teaching and the Canadian teachers’ enthusiasm of borrowing from Chinese math teaching was not sustained. After one trial, the collaboration between the two sides on mathematics stopped. However, the collaboration on water science has been sustained. Followed by an inspiring videoconference in May, 2015 involving teachers, students, and principals in both schools (Sister School meeting minutes, May 27, 2015), the Canadian teacher and two science teachers in the sister school continue their collaboration in the 2015-16 school year (Sister School meeting minutes, September 2, 2015).

Another pair of elementary schools, Pair 4, formally started their partnership the latest in May, 2014 (Sister School Meeting minutes, May 8, 2014). Starting from June 2014, the two parties decided to organize students’ pen pal activity and to exchange students’ art works. With the supervision of their teachers, students participated in a videoconference where they talked to
their pen pals directly and then exchanged letters. This pen pal activity culminated in a movie commentary project in which students in both schools were organized to watch the same movie following by a commentary writing activity. Some selected students’ writings were shared with the sister school. Another simultaneous activity was sharing students’ art works. Art works have been exchanged in two rounds by the end of the second project year, and each time the art works were displayed by participating teachers on one designated billboard in each school. Actually, the researcher personally helped the two schools deliver these art works back and forth and witnessed these displayed works in the school buildings. There were two Canadian classroom teachers involved in these activities. In the Chinese school, four Chinese teachers participated, among whom two were classroom teachers of the sister class while the other two curriculum leaders were appointed to coordinate school level activities related to the project. Unlike the Canadian school, which confined the activity within two classes, the Chinese school actually selected students from other classes and grades to participate in these activities. Therefore, one of the two curriculum leaders took an on-site coordinator’s role while the other leader helped the school share its school level students’ events with the sister school. The Chinese principal was also directly involved in meetings and in some coordination work whereas the Canadian principal mainly took an auxiliary role giving her two teachers’ autonomy to carry on the project. Starting from November 2015, the pen pal activity between the two schools, which was interrupted by a teachers’ strike in Ontario elementary schools during June 2015 to October 2015 (Project Communication record, September 5, 2015), evolved to become a student ambassador project in a hope of engaging more students across grades and classes in the whole schools. As well, students’ art work continues to be exchanged in the 2015-16 school year.

**Videoconferences**

The thematic activities described above were punctuated by videoconferences between schools as needed. The sister school meetings during which participating teachers can directly speak to each other constitute another form of reciprocal learning activity. Appendix I shows the full list of videoconferences between schools during the time when the project started and the end of second project year. The list of videoconferences is also organized temporally and by school pair, like the table of Thematic Activities (Table 1). It shows the time of each meeting, main topics, and participants including teachers, principals, and in some cases students. All the conferences
were coordinated and facilitated by RAs of the RL project. Sometimes the conferences were facilitated by RAs in one country only while others relied on the collaboration between RAs in the two countries. The main communication tool was Skype while QQ, which is a Chinese based tool, was also used in some circumstances as needed.

When a new partnership started, principals of partner schools usually met first before they involved interested teachers. With interpretation by the RAs the conferences in each pair started with sharing general information about the school and the main features of the education and the system in each country. The main purpose of these initial meetings was to identify common interests between schools. Subsequently, principals would invite teachers to the conferences so that teachers could share their experiences and discuss specific collaborative activities. As the partnerships evolved, the participants and forms of conferences varied depending on the decided content of collaboration. In School Pair 1, the two principals always participated when this pair was jointly planning a school-level student exchange program. Interestingly, the Chinese principal of this pair rarely invited his teachers in the meetings. After the student exchange program failed, two teachers, one teacher from each of the two schools, continued to meet to discuss a joint study without their principals’ presence. In Pair 2, the two secondary school principals handed over the meetings to teachers soon after their initial meetings. The subsequent meetings were then organized by subject areas according to the subjects taught by participating teachers. Basically, teachers took the leadership of each thematic activity and corresponding meetings while the principals played a supportive role in the background. Only a vice principal of the Chinese school was always involved because she was the on-site coordinator for the project assigned by her principal. When needed, the two principals met again in order to discuss issues and future plans of the partnership.

Unlike the two secondary school pairs, which either focused on one particular school-level activity or dissolved into several subject activities, the two elementary school pairs mainly took an approach that connected classroom teachers after principals’ initial exchanges and planning sessions. This different approach came about naturally because of one commonality of elementary schools in the two systems. In Canadian schools one elementary school teacher teaches almost all subjects of his or her class while in Chinese schools a homeroom teacher (Ban Zhu Ren) takes the full responsibility for the students in the class also. However, homeroom
teachers in Chinese elementary schools are usually specialist teachers who do not teach all subjects like their Canadian counterparts do. Despite different responsibilities between Chinese homeroom teachers and Canadian classroom teachers, they both spend a substantially long time with their classes each day. Given this commonality, therefore, most meetings between these elementary school teachers were about the progress and planning of ongoing sister class activities linking to the teaching and learning in each other’s classroom. Students were brought into the meetings occasionally; they were either directly involved in collaborative activities or shared their school experiences with students and teachers in the sister school. The principals participated as needed when activities were in process. In the case of Pair 3, one Canadian teacher and her several partners in the Chinese sister school basically took over the meetings as they planned and implemented activities. The two principals participated sporadically without real input. In Pair 4, the two principals followed through their limited number of sister school videoconferences and ongoing sister class activities.

Besides these videoconferences between teachers and principals in the two places, the two sides also exchanged correspondence, documents, and students’ works electronically or physically with RAs’ assistance. Exchanged documents and materials include school brochures and videos, school gifts, video clips of special events of the schools, curriculum documents and materials, syllabuses and teaching plans, teaching plans and video clips, and other items that were associated with ongoing thematic activities. Student work includes students’ compositions, pen pal letters, and art works. Obviously, these videoconferences, alongside exchanged emails, letters, documents, and materials, played a much greater role than mere communication. Rather, they are part and parcel of collaborative activities that complement those thematic activities between sister schools. Hence, they enhanced mutual understanding and learning through conversation and exchanged artefacts and held educators in two different countries together as professional learning communities.

**Characteristics of reciprocal learning activities**

There are some prominent characteristics of the collaborative activities that occurred in these INPLCs in the context of the RL project. These characteristics are related to the nature of the RL project, common features of teacher professional communities, and differences between the two
education systems. First, generally speaking, most of these collaborative activities, especially these thematic activities, are linked to teachers’ classroom teaching in one way or another regardless of the level of school. This feature is related to the de facto teacher-centered approach of the Ontario-Shanghai sister school network. Also, all the activities tended to involve students either in one or both of the two sister schools in each pair, although involving students was not a requirement from the project point of view. In elementary school pairs, the activities were linked to the classroom teaching of math, science, writing, media literacy, and arts. For example, in Pair 3, all the sister school activities were incorporated into the Canadian teacher’s (ET 8) teaching with her students. Even the pen pal letter activity in the Pair 4 was used in the Chinese school in a way that is tied to the classroom teaching. One Chinese teacher (CT 17) reported in her interview that:

“Writing letters is one part of our English curricular requirements. Our students didn’t have authentic opportunities to express themselves (by writing letters). They were only asked to write essays with given topics. This time I found that they have so much to say when they write letters (to their pen pal friends).”

In Pair 2, a few subject areas, including psychology, history, physics and mathematics, were involved. What these subject teachers discussed and exchanged was related to their current teaching in classrooms too. Nonetheless, among the four pairs, Pair 1 seemed to be an exception because their activities never got into the classroom level. The student exchange program is essentially extra-curricular while the joint study was stimulated by teachers’ academic interest and was not so relevant to their curricular teaching. Perhaps Pair 1’s approach, which failed to link sister school activities to classrooms, partially contributed to the unsustainability of the partnership, whereas the teachers in other pairs more easily maintained their momentum owing to the connection between the INPLCs and their classrooms.

Second, it is easy to discern that the topics and forms of the thematic activities as well as videoconferences across four school pairs are idiosyncratic. For example, in terms of the content of activity, Pair 1 was interested in exchanging students whereas Pair 2 delved into sharing and collaboration on subject teaching and learning. For the two elementary schools, although both pairs focused on the collaboration related to classroom teaching and learning, the topics of
sharing differed in terms of subject areas. This situation occurred probably because participating schools and teachers in the RL project enjoy a high degree of autonomy in terms of designing and implementing sister school activities. Actually, the RL project does not impose any agenda on each school partnership. The RAs of the project were also told to maintain a mainly supportive role as the schools in the two countries built relationships and professional communities. This stance was also stated clearly with principals and teachers at the outset of each partnership either by the two directors or by the RAs. For instance, one of the project directors reiterated this stance to a new principal of a Canadian research school at a planning meeting:

“…what we try to do is support what you want to do. We don't have any particular agenda; we don't want you (for example) to do this in math or English or something else. What we do, we want to support relationships with Chinese schools. The idea is that you build up an action plan or some sorts of two schools something you want to do together.”
(Project Meeting minutes, August, 31, 2015)

This naturalistic approach of building school partnership led to the situation that the topics, forms, length, frequency of interactions, and number of collaborative activities varied across the four school pairs because the question of how to go about the partnership seemed to mostly rely on principals’ and teachers’ interest, will, and discretion. For example, almost all of these thematic activities were expected to be long term collaborations when they were put forward by teachers and principals at the beginning. However, obviously, this was not always the case as shown in Table 1. Several activities were sustained, but others died out due to many contributing factors either related to teachers or schools. These sustainability factors will be further discussed in the following chapters in this thesis. As such, although educators may enjoy the ownership of these partnerships and collaborations in these INPLCs, from the research point of view the inconsistency of activities among these INPLCs makes it impossible to conduct systematic cross-case comparisons on aspects of these activities such as content and associated effects.

Third, the collaborative activities which occurred in these INPLCs in the Canada-China sister school network are mostly consistent with Little’s (1990) taxonomy of teacher collaboration in professional learning communities. Firstly, direct storytelling and scanning for ideas of teachers
does not seem to be applicable in these INPLCs because participants mostly rely on RAs’ interpretation or facilitation to share practices and exchange ideas with their partners. Among the thematic activities under analysis, three of them mainly focused on sharing methods, materials, and ideas. They are the two subject activities (Physics and History) in School Pair 2 and the sharing student art work activity in Pair 4. These activities mainly played a role of showing the other side new information and methods by exchanging a variety of materials such as student work, curriculum materials, and records of teaching. Participating teachers were involved in sharing these materials; however, teachers did not seem to intend to raise the degree of collaboration in these cases. Secondly, three of these thematic activities can be classified as aid and assistance, including the student survey project, the AP (Advanced Placement) math course in Pair 2 and the sharing math teaching in Pair 3. For these three activities, one side helped the teachers in the sister school to experiment with new initiatives, either a new student project or a new course or a new teaching unit. The collaboration of the three activities is mainly one-way since one side of the partnership played a knowledge provider role. Thirdly, most of these thematic activities involving teachers in the two countries can be regarded as joint work by design. According to Little (1990), joint work is the highest level of teacher collaboration. Educators including teachers and principals in these sister schools negotiated areas of joint initiatives by initial exchanges and subsequent conversations. Consequently, teachers expected to learn from each other by jointly working on something in a way that would benefit either students or themselves. However, some activities were more successful and sustainable than others. For example, the two joint initiatives in Pair 1 were fruitless whereas the water education project in Pair 3 and the pen pal letter activity in Pair 4 were sustained thanks to participating teachers and students’ effort. Presumably, these more sustainable joint initiatives could make more contribution to teachers’ cross-cultural professional learning as well as students’ experience if they are involved.

Fourth, different ways of dealing with students’ curricular and extra-curricular learning activities in the two education systems created mismatches in the coordination of sister school activities. Meanwhile, these differences created difficulties for the researcher to categorize these thematic activities in terms of curriculum. Extra-curriculum activities can be clearly defined in Ontario schools (ETFO, 2004) whereas everything educational happening in Shanghai schools can be regarded as school curriculum (Shanghai MEC, 2004b). For Chinese teachers, nothing is really
“extra” even if the sister school activities are out of their existing responsibilities. I will further discuss this matter in detail in the next Chapter 7. Especially in Shanghai elementary schools, almost all students’ extra-curricular learning activities are treated as part of the school curriculum and hence teachers’ teaching responsibility. Examples of this kind of learning activities that were mentioned by Shanghai teachers in their interviews include Science and Technology Festival, Book Fragrance Festival, Arts and Sports Festival, to name a few. These student learning activities, including the new sister school project, are regarded as part of Shanghai teachers’ responsibility besides their curricular teaching, as long as they are assigned to someone. By contrast, in Ontario schools extra-curricular responsibilities are “extra” and hence can be separated from main classroom teaching activities. Consequently, these “essentially extra-curricular” sister school activities had to be put on hold when “extra” work was not favored in these Ontario schools under special circumstances such as a work-to-rule strike.

Besides the different concepts of extra-curricular activity, the organization of student learning activities differs in the two systems too. In Shanghai elementary schools, students’ learning activities are usually organized at the school administration level and coordinated by a specially designated middle level school administrator. Supervised by the school leader of student activities, a designated Ban Zhu Ren (homeroom teacher) of each class collaborates with the leader and is responsible for activity organization at the class level. For example, in Pair 3 the video clips that inspired ET 8 to “make connection with my students” are about a school level student learning event on water science education in the Chinese school. These video clips were shared by one Ban Zhu Ren (CT 10) who was then partnered with ET 8. In Pair 4, CT 18 is the school leader who takes responsibility for the coordination of all this kind of student learning activities while CT 15 is the Ban Zhu Ren of the sister class collaborating with a novice English teacher CT 17 as her assistant. It seems that no comparable structure and roles exist in Ontario elementary schools in terms of organizing student learning activities, although there are similar educational events taking places in Ontario schools. This structural disparity caused mismatches and difficulties, at least in the two elementary school pairs. For instance, CT 18 in Pair 4 would like to share school level students’ learning activities with the sister school. However, she only found out that she could not find “someone in the sister school who is in charge of equivalent work as I do” (CT 18, Interview). Similarly, one Chinese teacher (CT 12) in Pair 3 would like to share her Ban Zhu Ren experience and practices; however, she realized that this attempt could
not be implemented at all because there is no comparable role in the Canadian sister school. As such, whether an activity is curriculum related or extra-curricular really depends on these different understandings in the two systems.

Participants’ reciprocal learning experiences

These foregoing collaborative activities, including thematic activities, videoconferences, as well as exchanging documents and materials, form the reciprocal learning space where educators in the two countries interact. Obviously cross-cultural, cross-system teacher collaboration did occur since these activities connected these educators of different cultures and experiences through a variety of activities. Presumably, the reciprocal learning space should also enable teachers’ mutual learning through conversations and collaborations in these INPLCs. Hence, given the occurrence of these collaborative activities, another central quest of this study is to find empirical evidence of teachers’ cross-cultural professional learning that stems from the reciprocal learning space. The evidence can be investigated through the aspects of impact on teachers according to the conceptual framework of the study; also, it is certainly related to teachers’ perceptions and experiences of reciprocal learning. Before I present findings related to motivation for participation, knowledge sharing, impact on teachers’ professional identity and practice in the next chapter, this section reports teachers’ overall experience of reciprocal learning. In this section, I only deal with participants’ overall experience of giving and receiving knowledge while specific knowledge shared and learning by educators will be reported in the next Chapter 7. Meanwhile, I also report participants’ frustrations and concerns that were associated with the aforementioned collaborative activities in the emerging sister school network. When applicable, differences and similarities between Chinese and Canadian teachers will be reported too.

Giving and Receiving of Knowledge

Since mutually beneficial learning is the expectation and goal of the Canada-China sister school network and these associated teacher INPLCs, the data analysis tried to reveal to what extent mutuality was achieved in this regard. To this end, I firstly count the number of incidences where participants talked about the influence on teacher knowledge in the interviews. Four areas of teacher knowledge were identified, namely curricular knowledge, pedagogical knowledge,
knowledge of education systems, and personal practical knowledge. The following Table 2 shows that in general mutual learning between the two groups of educators did occur since both sides reported giving and receiving of knowledge related to the participation in school partnerships. However, the table seems to suggest that Chinese teachers perceived more learning through the international partnerships than their counterparts did. Also, it shows that both Chinese and Canadian teachers talked about more perceived knowledge gaining than offering. As for knowledge offering, although many teachers are aware of what they offer through their collaborations, the table seems to suggest that Canadian teachers are more confident about offering knowledge to their partners than Chinese teachers. The Canadians reported an equal number of knowledge offering experiences as the Chinese did although the number of Chinese participants was almost twice that of the Canadians.

Table 2 Teachers’ perceived knowledge giving and receiving

<table>
<thead>
<tr>
<th>Teacher knowledge</th>
<th>Canadian teachers (n=10)</th>
<th>Chinese teachers (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curricular</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Education system</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Pedagogical</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Personal practical</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Aggregated gaining</td>
<td>35</td>
<td>75</td>
</tr>
<tr>
<td>Knowledge offering</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

The actual interview data corroborate the above observations. In the interviews, I asked teachers about what they have offered or can offer their counterparts in the other country to learn from. Many participants in both countries are aware of the things that they are offering or can offer to the sister school or the other education in general. However, the contents of offering perceived by Canadian and Chinese teachers are very different, and Canadian teachers seem to have a more concerted idea in terms of what is good in Canadian education. Canadian teachers’ knowledge offering seems to be associated with their impression of Chinese education. Canadian teachers
seem to believe that Chinese teaching is “very traditional” and that rote learning still permeates Chinese schools, although some of them realize that their impressions of Chinese education might not be true because they are based on “rumor” or personal observations on Chinese international students in their schools. Actually, only one participating teacher visited his sister school and personally saw “every class was echoing, repeating, repeating, and repeating” (ET 9, Interview). Associated with this kind of “traditional” impression, Canadian teachers think that their “new” ways of teaching informed by constructivist learning theories are worthwhile to be shared with their Chinese counterparts. During the interview, Canadian teachers often mentioned “inquiry based learning”, “hands-on strategies”, “problem solving”, “action-oriented” teaching, and “collaborative learning”. Canadian teachers seem to believe that these ways of teaching make their students more creative and critical in thinking than Chinese students. The following sample quotes show how Canadian teachers view Chinese education and what they think they can offer to it.

“I think the most beneficial point is that they would learn from us the learning strategies, student critical thinking in different subjects. They would find some difference(s).” (ET1, Pair 1, Interview)

“…I think I wanted to show them hands-on strategies of teaching history…that was the intention behind the French Revolution Tableaus Challenge activity …based on what I see through my students here who come from China…they learn by rote…The changing that I am finding among my students is that they are becoming better thinkers, so they are not just memorizing history by rote anymore, they are learning the narrative and they are learning how to engage with it and think about it and make conclusions based on it…I am not sure how much is happening there (in China)…But I think it is something worthwhile here and something that could be learned from anywhere”. (ET 7, Pair 2, Interview)

“Canadian students would say immediately, oh chopsticks, I can prop the door and open it with them, I could probably use them to stab a fish…we could build a raft floating on the river…Chinese students, eating. So you see differences in terms of open-ended thinking. Very different. So, I think there is something that China can learn from us.” (ET 9, Pair 4, Interview)
Chinese teachers do not seem to think they can offer much in terms of ways of teaching and learning. Only three secondary school teachers believe that the Chinese way of teaching might be complementary to the western style of teaching. During the interviews, they mentioned that the Chinese way of teaching focuses more on “content knowledge”, is “more rigorous”, and might cultivate more “sophisticated thinking of students” than western pedagogies that they understand. While Canadian teachers almost unanimously think their “new” ways of teaching might be helpful for their partners, Chinese teachers think what they can offer are basically some features of their schools or of Chinese education in general. A few Shanghai teachers said they would like to share strategies of teacher development including Lesson Study Group (Bei Ke Zu) and Teaching Research Group (Jiao Yan Zu) with the sister school, which are two typical forms of PLC in Chinese schools. Several of them would like to share special curricula or student learning activities in their schools. Three Chinese teachers, however, simply said they “don’t know” what to offer. The following shows several sample interview excerpts.

“To be honest, I don’t know what to offer. The principal might be more competent to describe the situation of our school.” (CT 1, Pair 1, Interview)

“…what I brought to them is my experience of (teaching) Tangram. Tangram is also part of our traditional Chinese culture. I was able to pass on our traditional culture and make them know about it.” (CT 11, Pair 3, Interview)

“I mentioned the International Culture Festival, which is the biggest feature of our school. Actually, we selected some main features of the school to share with them.” (CT 17, Pair 4, Interview)

**Frustrations associated with collaborations**

The anticipated reciprocal learning characterized by teacher collaboration and mutual learning did take place to some extent as shown in the foregoing sections. However, teachers’ reciprocal learning experiences in these nascent INPLCs were not free of concerns and frustrations. Some participants in both Ontario and Shanghai sites, including both teachers and principals, expressed some negative feelings during interviews or project meetings. Especially, those teachers who have not figured out how to take advantage of this alternative professional opportunity more
likely felt frustrations associated with sister school activities than other participants. These negative accounts are important because they constitute a part of the whole reciprocal learning experience in the context of the Canada-China sister school network.

The first issue reported by participants is the slow pace of collaboration and the low frequency of interaction. Ideally, teachers are expected to meet and talk with each other through videoconferencing tools roughly once a month. However, this pace was easily interrupted by many factors such as different holiday schedules in the two places, examinations on either side of a partnership, difficulties of finding a common meeting time, tight existing work schedules, communication delays, as well as some special incidences such as a teacher strike in Ontario schools. As a result, sometimes the interval between two videoconferences in one pair of sister schools can be as long as a few months. No wonder some participants expressed their frustrations in this regard when I interviewed them at the end of the second project year. For example, although seemingly the collaboration between the two secondary schools had lasted a fairly long time, a few teachers in Pair 2 reported that they were still feeling they just “had limited interactions” (CT 9), “didn’t have lots of opportunities to observe” (ET 6), and “talked so few times” (ET 7). The principal of the Chinese school in Pair 2 also confirmed in her interview that her teachers and vice principal were “not feeling too well about the project”. Similar comments as such were heard in other participants’ interviews in other school pairs too.

The second concern is about the scope and depth of the collaborations. For example, the only Chinese teacher involved in Pair 1 was frustrated because he felt that the “sharing is still superficial” (CT 1, Interview). One teacher in Pair 4 who is interested in the school-level collaboration on students’ learning activities was concerned that “little had been touched with regard to other interested topics” of her (CT 18, Interview). In Pair 2, teachers of the two sides expressed a similar issue regarding the depth of sharing in their interviews. With exchanges of teaching materials and video clips, CT 5 felt that he “could only see one small point of their work” while CT 6 wanted to know more and “the whole picture”. ET 5 in the Canadian school also said that the collaboration “did not have the opportunity yet to go into as much depth as we would like”. Several Chinese teachers in Pair 3 expressed their frustrations too. For example, CT 11 observed that in the early stage of the partnership the way of picking up a random topic without follow-up could only have “little and temporary” impact on teachers. They had expected
The collaboration could “go deep” and could result in real application in their practice; however, the reality told them that this goal was not that easy to achieve. CT 10 reflected in a Project Meeting (May 14, 2015): “Personally, I am not too optimistic about the project. Indeed, it helps us to open our eyes and to be open-minded; however, it is very difficult to go deep…”.

The third concern is the lack of direct face-to-face meetings. For example, in Pair 4, CT 18 articulated her frustration over the lack of in-person contact that she believes jeopardized the partnership and associated professional learning. She felt that she was not able to communicate well with the sister school and the teachers over there without initial in-person contact. For her, without face-to-face meetings, Canadian teachers are not “real friends” yet and that made her feel constrained in communication and sharing (Project meeting minutes, May, 29, 2015).

Actually, this organizational issue was raised many times in participants’ interviews; therefore, I will fully discuss it in Chapter 8, which focuses on organizational conditions of international school networks. As of the beginning of the third project year, no mutual school visits either by principals, teachers, or students have occurred although many conversations and much effort in this regard were made by the RL project and by the schools. To the researcher’s knowledge, the negotiation among partners of the project is still going on; and therefore the hope of future in-person exchanges, which can be regarded as another type of important sister school activities, remains.

Summary

The conception of reciprocal learning contains two key elements—collaboration and the learning for mutual benefits. This chapter depicts the reciprocal learning space between Ontario and Shanghai schools. The overall view of the space provides the context in which the impact of the space and organizational conditions of INPLCs between the two countries can be further discussed. The first part of this chapter provides a description of collaborative activities that took place in the Canada-China sister school network and these associated teacher INPLCs. Following the description of collaboration, this chapter reports teachers’ experiences of mutual learning as well as their concerns associated with sister school activities. Two main forms of activities—thematic activities and videoconferences—were summarized by highlighting some main features of them. These collaborative activities constitute the reciprocal learning space in which schools,
educators, as well as the education of the two countries participate. It is within the interactive space that teachers alongside their school leaders exchanged knowledge, ideas, and practices. Meanwhile, it is the space that enables the researcher to investigate teachers’ reciprocal learning as they collaborate. As a researcher, as well as a facilitator, of teachers’ reciprocal learning, I share teachers’ enthusiasm about the opportunity of cross-boundary collaboration and learning. At the same time, I also empathize with teachers’ frustrations as they found what they anticipated was not quite working. However, from the researcher’s point of view, these frustrations are quite understandable given that these INPLCs are rudimentary and that there are so many obvious disparities between the two countries, systems, and cultures, which are so remote from each other. Despite these concerns, it is evident that participants in both countries did benefit from the experience since they shared and learned a lot of information about their sister school, about the education in the other country, and about particular practices of their teacher partners. The next Chapter 7 will talk about the impact of the reciprocal learning activities on teachers. It will be followed by Chapter 8 that will discuss organizational conditions of the INPLCs between Ontario and Shanghai schools.
Chapter 7
Motivation, knowledge, practice, and professional identity

This chapter is structured according to the four aspects proposed in the conceptual framework, namely motivation, knowledge, practice, and cosmopolitan professional identity. Each section begins with describing teachers’ current situation in each aspect prior to their participation in these INPLCs. Subsequently, each section reports the influences of the participation on teachers’ motivation in relation to participation, knowledge, teaching practice, and professional identity respectively. This chapter mainly draws on teacher interview data while principal interviews provide supplementary information when needed. Occasionally, Project Meeting and Sister School Meeting minutes are consulted too. Appendix J shows the main themes that were identified from the teacher interviews; also, the appended table juxtaposes the number of incidences where Canadian and Chinese teachers talked about each theme during their interviews. Hence, comparisons between Canadian and Chinese teachers, as well as secondary and elementary school teachers, are conducted in certain sections when the data do show salient differences among these groups.

Motivation

Sources of motivation

Broadly speaking, according to the literature, the sources of motivation can be related to either extrinsic factors outside a person or intrinsic factors within the self. The data reveal that, in the face of the opportunity for international school partnerships, teachers were driven by both sources of motivation to participate. Two evident intrinsic sources of motivation for both Ontario and Shanghai teacher participants are the expectation of cross boundary professional learning and teachers’ educational or professional background. The extrinsic sources of motivation include the expectation of benefiting students, colleagues’ influence, the environment of professional learning, and the principal’s influence. Similar to the intrinsic factors, most of these extrinsic factors also affected both Ontario and Shanghai teachers; however, the principal’s influence was only reported by the Shanghai participants as one factor that prompted them to participate. These differences between Canadian and Chinese teachers will be discussed in the
next section while this section mainly focuses on common extrinsic and intrinsic motivating factors.

Among the extrinsic sources, the expectation of benefiting students constitutes the most important reason for teachers, especially Canadian teachers, to participate in the INPLCs. Some teachers believe that students can benefit through their direct or indirect involvement in the sister school partnership alongside teachers and that the benefit can be linked to students’ academic study or cultural learning. For example, one Canadian social studies teacher in Pair 2 wanted her students to be “interacting with different cultures” through the partnership because this kind of cross-cultural interactions “is beneficial in many ways” (ET 3, Interview), and a Ban Zhu Ren in Pair 3 felt that the sister school partnership can “broaden the horizon of students and bring in different things” (CT 12, Interview). Since the two places used different languages—English or Chinese Mandarin, teachers also expected their students to enrich their language learning experience through the cross-cultural partnerships. Actually, for years English has been regarded as the most important second language for Shanghai students while learning Chinese gains more and more popularity in Canadian schools. In each of the four participating Canadian schools there is an elective Chinese language program or course. As the following interview excerpts show, both Chinese and Canadian teachers talked about the same interest in enhancing students’ language learning through the partnerships.

“I am the assistant curriculum leader for languages...we offer Mandarin in my school. It calls on for my responsibilities...Offering them an opportunity for exchange, it is an enriching experience.” (ET 2, Pair 1, Interview)

“...it attracts me for students. I am an English teacher, the communication between sister classes uses English. I believe students can learn a lot of things that they don’t learn in classes. For example, the experience of talking with them in English. They can’t have this kind of experience in my class.” (CT 17, Pair 4, Interview)

Language is not the only academic area for student benefit that was expected by the participants since many of them are from other subject areas. For instance, in Pair 2, one Chinese math teacher believes that providing students with the opportunity of learning AP math can “cultivate their awareness of applying math” and hence “benefit their future study” (CT 4, Interview) and
the Canadian teacher in Pair 3 talks about her expectation of improving math and science teaching by learning from Chinese education.

“Chinese education system around math and science seems to us being very disciplined and more advanced in terms of student achievement...So my interest is, as math and science teacher...in looking at in what ways can I modify my teaching to help my students achieve a higher outcome in math and science.” (ET 8, Pair 3, Interview)

Ontario teachers seem to have more reasons to be concerned with student benefit through the Canada-China sister school network. Other than academic and cultural learning for students, Canadian teachers were also motivated by the fact that more and more Chinese students are coming to their schools. In one of the participating Canadian elementary schools almost all of the students have Chinese connection while the other elementary school is located in a community adjacent to the China Town of the city. One of the two Canadian secondary schools also has a lot of Chinese Canadian students as well as a growing number of Chinese international students. The teachers in these schools talked about their considerations of the sister school partnerships in relation to the student demographic of their schools. Below are two examples.

“I was interested just because of our school demographic. We do have a high population that do come from China…and we have a high Asian population. So, I was interested in seeing what the education system was like in China comparing to Canada…(it) would help me with as I engage my students here.” (ET 7, Pair 2, Interview)

“The fact that all of our students, 600, have connections with China. What’s memorable for me is really, it’s visually as much as academically the look on their faces. And the enthusiasm they know they are gonna learn something and talk about China…they want to know more about their country of origin. They want to understand their root.” (ET 9, Pair 4, Interview)

There are two prominent intrinsic sources of motivation for being involved in the Canada-China school network. The more important factor seems to be teachers’ expectation of professional learning outside the local education boundary. Both Ontario and Shanghai teachers think that the international professional communities can provide them with opportunities to learn from the
other side. Most of the participating teachers were curious to see how the other education works and how the teachers over there teach. While most teachers’ intention of learning is in a general sense, some teachers have specific interests in particular areas such as science, math, psychology, or student assessment. For examples, the following quotes show how teachers think about the cross-boundary professional learning opportunity.

“I was interested in seeing what the education system was like in China comparing to Canada. So, really for me it was about…sort of academic and professional pursuit… I wanted to know what they are doing…” (ET 7, Pair 2, Interview)

“I was feeling that sharing with a school overseas is a good thing in any case…I would like to learn about science education in foreign countries. So, I think the sister school project could be helpful.” (CT 13, Pair 3, Interview)

Regardless of general or specific interests of professional learning, the key is the difference between the two education systems that triggered teachers’ curiosity to learn. Really, it is the difference that attracted teachers and school leaders on two sides to participate in order to “learn from each other's strong points to make up one's deficiencies” (CT 5, Pair 2, Interview). Several teachers especially pointed out that their motivation for cross-boundary learning is related to the puzzles in their own work or their observations of “weak points” in their own education. They want to learn from the difference between the two systems in a hope of improving their own teaching or education in general.

“…I want to know what’s happening there. We have a club, a math club. The students who are doing well in the math club mostly come from China… So, we want to know what’s going on there.” (ET 4, Pair 2, Interview)

“Other than student assessment, I am also interested to learn a variety of areas, such as how they organize students’ (extra-curricular) activities, how they involve parents, and how they make use of community resources. These areas are weak points of Chinese education. We are just beginning to be aware of them and work on them.” (CT 18, Pair 4, Interview)
Participating teachers’ interest in cross-boundary professional learning is related to their personal, educational, or professional background. Teachers’ past relevant experiences constitute another intrinsic source of motivation to participate in these INPLCs. Some Shanghai participants reported that they used to be involved in similar international initiatives or participated in teacher development oriented research projects before. Particularly, the two Shanghai elementary schools are also research sites of a longitudinal research titled New Basic Education Research (NBER) that is led by a renowned Chinese scholar Professor Lan Ye in East China Normal University. This University is also one partner institute of the RL project. Due to this connection, several teachers directly related the participation in the RL project to their past experience in the NBER.

“I think it was related to (my experience in) NBER. Over the past years, when I was still a Ban Zhu Ren, I had been always working with Dr. L (ECNU) and CT 12 (in Pair 3).” (CT 18, Pair 4, Interview)

“I have been involved in the NBER project for a long time. I feel that the professors of NBER truly think for students’ wellbeing and school development. Since these professors promoted it (sister school project), I follow them actively too.” (CT 12, Pair 3, Interview)

Unlike these Shanghai participants who link the sister school partnership with their past research experience, Canadian teachers relate this learning opportunity to the interests stemming from their personal or professional backgrounds. For example, ET 1 in Pair 1 would like to share computer education with the sister school because she is the head of the Computer Studies in the school. For ET 4 in Pair 2, he feels affinity to Chinese math education because of his own educational background in an Asian country while ET 9 in Pair 4 is simply “always fascinated” by China and Asian culture. In Pair 3, the Canadian teacher’s background in experimental science and her father’s influence, who is a water scientist, prompted her to engage in the collaboration on water science education with the sister school. Moreover, speaking of her appreciation of this new form of INPLC, she said:

“I have always been involved in teacher learning by working with other teachers. So for me that (sister school partnership) was really what it was. When an opportunity (like this) came up I never say no.” (ET 8, Interview)
Comparing sources of motivation

Comparing the accounts where teachers in the two places talked about the motivations for participating (See Appendix J) suggests that there are some disparities in addition to commonalities between Ontario and Shanghai teachers in this regard. One, many Chinese participants referred to the influence of their principals as one reason for participation whereas no Canadian teacher thought in that way. Actually, in all the research schools in both countries all principals are involved at the forefront in terms of agenda setting and sustainability of the school partnership. Principals’ enthusiasm and their tangible or intangible support for teachers’ involvement and subsequent actions are presumably stimuli for teachers in all the schools. Despite the commonality, the principal factor as a source of motivation is only reported by teachers in the Chinese schools. Basically, at the beginning many Chinese teachers just regarded the participation as a task assigned by their principals, although later they might develop their own interest in sister school activities as they saw benefits for themselves or for students. In their interviews, many Chinese teachers reported that they were “assigned” or “persuaded” to participate at the beginning. Contrastingly, no Canadian teachers regarded the participation as an assignment from the principal or the school.

“Mainly because it was the school’s assignment.” (CT 6, Pair 2, Interview)

“At the beginning, the Principal and VP looked after the project by themselves. They became too busy to be responsible for it. So, the Principal designated this task to me.” (CT 14, Pair 3, Interview)

“…when the school leaders came to ask me if I would like to take this task I hesitated a little bit…” (CT 16, Pair 4, Interview)

In the Canadian schools, principals’ authority and persuasion might only have very limited influence on teachers’ decision to participate. Teachers just “put up hands” when principals asked for volunteers. Indeed, Canadian teachers seem to participate in these INPLCs because of their own free will. In the Chinese sites, however, when the project becomes a school level initiative due to the principal’s interest and decision, the influence of the principal and the collective atmosphere in the school made teachers feel obliged to participate. Actually, while
Canadian principals emphasized teachers’ voluntary based participation. Chinese principals did not think it would be an issue to “select” teachers and to assign “some extra work”. The following quotes of two Chinese school administrators are telling.

“I know in foreign countries teachers’ will is important. They are not like us. For us, sometimes because the task is assigned by the administration teachers have to do no matter what. Also, we have some stimulating mechanism. This won’t happen in foreign countries.” (CVP 3, Pair 3, Interview)

“We selected well-performing teachers when we chose a class to be connected with the sister school.” (CP 4, Pair 4, Interview)

This difference might be explained by different organizational cultures in the Canadian and Chinese society. After all, these Shanghai research schools operate in a Chinese society that is renowned for its hierarchical, authoritative, and collective cultural characteristics whereas the Ontario schools exist in a democratic society where values such as equity and individual choice are upheld. Nonetheless, this is not to say that Chinese teachers were completely forced to participate. Some of them did have or develop their own interests in cross-cultural teacher collaborations. In addition, the Chinese principals were also willing to use organizational resources to stimulate teachers to participate. Probably, using some sort of initial persuasion and pressure is just the normal way of mobilizing teachers in Chinese schools to invest in this kind of “extra work”.

Two, teachers in the two places can also be contrasted in terms of colleagues’ influence as a motivation to take the professional learning opportunity. Since this study applies the concept of PLC to investigate teacher learning in the international setting, the possibility of linking within-school PLC and the INPLC is of interest to the researcher. Contrasting Canadian and Chinese participating teachers’ accounts, it seems that Shanghai teachers’ participation takes a more collegial approach than Ontario participants. Many Ontario teachers reported that they have little chance to share their learning experience with their colleagues in the school. For instance, one elementary teacher reported that “there was the feeling of being the only one in the school” (ET 8, Pair 3, Interview) while another secondary teacher said “there wasn’t opportunity for that” at all (ET 6, Pair 2, Interview). At most, Canadian teachers were able to talk about their experience
“individually”, “in passing”, or “in a very informal way”. Across three of the four participating Shanghai schools, however, teachers reported that they were “working in groups”, had the chance to be engaged in a “group chat”, and were supported by other teachers in the school.

“…other teachers would support if any one teacher would like to do something. This is one feature of our school culture.” (CT 13, Pair 3, Interview)

“We actually work in a group; it wouldn’t succeed if it only relied on me…” (CT 16, Pair 4, Interview)

Moreover, Chinese principals’ accounts complemented these teachers’ reports too. For example, CP 2 would like participating teachers to be the “seeds” for other teachers’ professional learning while CP 4 confirmed that collaboration is “a very good culture of the school”. Nonetheless, it is not true there is no exception in these Canadian schools. Actually, ET 9 in Pair 3 brought in his teaching partner at the beginning of the sister school partnership because they “share everything else” while ET 8 in Pair 2 influenced her mentee and the mentee started participating from the third project year. Except for these two special cases, however, Canadian accounts of colleagues’ influence on their participation in the INPLCs are quite different from those of Chinese teachers.

Three, another striking difference between Chinese and Canadian participants is related to teachers’ sense of influence from outside the school on their professional learning. Chinese teachers sense the influence of societal and educational change in Shanghai and China and embrace many opportunities of learning about western education. In the interviews, Shanghai teachers and principals often mentioned that they “have many channels to learn about western education”, although the “western education” does not necessarily mean Canadian education. The learning resources for Shanghai educators include international teacher exchanges, imported western curricula that are used in schools, online resources, books and media coverage about western education, personally visiting overseas, and local professional development opportunities such as visiting international schools provided by the Education Bureau. At the same time, Chinese educators observe the changes in the society and in education that impact their practice and learning. They mentioned some current events and trends as to Shanghai education such as the ongoing curriculum reform, the most recent Gao Kao reform, students’
going abroad, and more and more international collaborations at the school level. The following excerpts from one teacher and one principal’s interview reflect these dynamics.

“The grand backdrop is that Shanghai is an internationalized modern metropolis. More and more people in Shanghai go abroad and look at education in foreign countries. Another is related to Shanghai education reform. Particularly, high school curriculum reform and Gao Kao reform place more and more weight on the links with real life and with the society.” (CVP 1, Pair 2, Interview)

“Over the past ten years, we have been working on innovative things. The second round of Shanghai Curriculum Reform created the third curriculum category, which is Inquiry Curriculum. The reason why this category was added was that we saw the gap between us and the education in foreign countries…I think we learned from western developed countries in this respect…” (CT 13, Pair 3, Interview)

Unlike Chinese participants’ “many channels” to learn about the western education, their Canadian counterparts unanimously reported that they had little chance to learn about Chinese education. A few of them said that they learned something about Chinese education “only from students” who came to their classrooms from China; several teachers simply reported that they knew nothing about Chinese education prior to their involvement in the RL project; and two teachers had imagined Chinese by analogizing it with the education in other Asian countries that they had experienced before. The only exception is one elementary teacher (ET 9) who had visited the Chinese sister school a few years ago and led a training session for Chinese English teachers in another province of China. Other than ET 9, no Ontario teacher participants had any substantive exposure to Chinese education. Although it is unrealistic to expect Ontario teachers to treat learning from Chinese education as a priority of professional learning, as far as the RL project is concerned, this gap might have played a negative role in attracting Canadian teachers to participate in the Canada-China school network, whereas their Shanghai counterparts seemed to be more knowledgeable of western education in a sense and seemed to be pressurized to look outside their boundaries.
Motivation Change

There are three possible degrees of motivation change—no change, positive change, and negative change—after teachers participated in the sister school network. I labelled each teacher participant’s motivation change according to available information. Appendix K shows the result of this analysis. This analysis is mainly based on what teachers directly reported in the interviews. In some cases, where participants did not explicitly indicate their motivation change, other information was used such as a teacher’s enthusiastic mentioning about a future plan of sister school activities or a participant’s actual action at the beginning of the third project year. Overall, it seems to be quite a mixture in terms of teachers’ motivation changes after they had experienced the cross-boundary collaboration for approximately two years.

A third of the participating teachers in the two countries reported or showed positive motivation change. This group of teachers either continued engaging in the INPLCs in the third project year or expressed their interest to continue. The main reasons for the motivation increase include observed student improvement, effectiveness of the collaboration, and willingness to invest in more professional learning. The following interview excerpts reflect teachers’ increased enthusiasm.

“I think now my motivation…I even took (a course) Environment Education Part I this summer… my motivation is more for looking at the need for global collaboration in terms of dealing with environmental issues and making students understand we are all going to make positive change to the future…” (ET 8, Pair 3, Interview)

“At the beginning, I felt it was inconvenient…As I saw students’ creativity and thoughts were inspired, I now think the project is very good. Also, the partnership school is very cooperative…I learned a lot of useful information through our sharing too.” (CT 17, Pair 4, Interview)

An equal number of teachers reported negative changes of motivation to some extent. The majority of this group of teachers stopped participating in the RL project by the end of the second project year due to different reasons. Several of them left because they were not interested any longer while several others left because the sister school collaboration shifted
focus. These teachers mentioned several perceived issues associated with these cross-national school partnerships, such as concerns over sustainability, unpredictable real effects, and formidable difficulties in communication and in the implementation of plans. More importantly, once a teacher senses the expectation of collaboration or learning cannot be satisfied by the sister school partnerships his or her “excitement falls” and the motivation to participate erodes. Besides, as I will report in the next Chapter 8, some unfavorable organizational conditions also seem to contribute to the attrition of teachers’ motivation.

“...the relationship with the sister school didn’t unfold in the way that I envisioned. And so I think my motivation diminished because of that. I think maybe it is harder to have a cross-curriculum exchange in the area of social science because it is so language-based.” (ET 7, Pair 2, Interview)

“At the beginning, I was curious to learn new things...However, I am feeling that it is very hard to carry out a deep study and collaboration on math teaching due to difficulties of time and space.” (CT 10, Pair 3, Interview)

Another one third of the teacher participants’ motivation does not seem to be affected. Among them, a few teachers reported that they remain motivated to participate in the project because “there is (still) enthusiasm between both of us” and they are “still curious to learn” despite difficulties and inconveniences associated with the collaboration and communication. For several Chinese teachers, however, their motivation remained low since they were asked to take on this “extra burden” by their principals in the first place. The experience in the school partnership have not boosted their enthusiasm yet since they did not see the benefit for themselves or for students before they either chose to leave or had to stop.

Knowledge

First contact with the other’s education

As aforementioned, almost all of the participating Canadian teachers had little or even “ground zero” knowledge about Chinese education before they started in the Canada-China sister school partnership. It seems that the only source for them to learn about Chinese education is those
Chinese students coming to their schools and classrooms. Even the internet is not a useful source for Canadian teachers to learn about Chinese education in part because of language barriers and the government’s censorship on Google in China. Certainly, Canadian teachers are aware that their Chinese students’ accounts might not be reliable. For example, one math teacher reflected in her interview:

“Just from my students. So, it was just student perspective…I went on internet to look at different curricula and what’s happening there. I wasn’t able to find anything about curriculum in China by doing Google. Probably they are not on Google, right?” (ET 5, Pair 2, Interview)

Shanghai educators do have a lot of opportunities to learn about western education. However, almost all Shanghai teachers and principals still reported they either knew nothing or little about Canadian education prior to their involvement in the RL project. When Shanghai teachers and principals refer to all education outside mainland China, most of them use an inclusive term “Guo Wai Jiao Yu” (foreign education), rather than western education or the education of a specific country. Actually, they mentioned a long list of education systems that they have encountered in one way or another, including the USA, England, Australia, Germany, Korea, Singapore, and even Hong Kong. Chinese educators seem to be interested in them all regardless of any possible differences among these education systems. To improve their education and practice, Shanghai educators are keen to learn and adopt anything available and useful to them from the education of these economically developed countries or regions. Particularly, among the list of foreign education, participants often referred or alluded to American education when they talked about western education. As for the actual Canadian school education, which is for Shanghai teachers just one similar type of western education, the RL project just offered the first “window” that “leads to the opportunity of observing western education and culture in general” (CT 14, Pair 3, Interview).

“I had little knowledge about Canadian education, but I have learned something about American education. It is because American education seems to be promoted in the (Chinese) media...Little resource about Canadian education was available really.” (CT 10, Pair 3, Interview)
“As of foreign education, (I learned) through internet and movies…But I had never paid attention to Canadian education before.” (CT 17, Pair 4, Interview)

Indeed, the newly created Canada-China sister school network and associated teacher INPLCs helped educators in the two countries to substantively observe each other’s education for the very first time. When teachers engaged in the thematic activities, talked over Skype, observed each other’s teaching through video clips, and exchanged curricular materials, syllabuses, and teaching plans, they had opportunities of learning each other’s education system, schools, classrooms, and pedagogical features. According to the literature, presumably, participating teachers can be sharing, learning, and reflecting on their knowledge through the collaborations in these INPLCs.

I managed to organize what teachers said in the interviews about their first impression of the other’s education into four broad types of teacher knowledge, although during the data analysis I realized that it was not easy to categorize the shared teacher knowledge in these INPLCs due to the disparities among the contents of these collaborative activities as I have described in Chapter 6. Mainly, teachers in the two places shared knowledge about features of the other’s education system, learned knowledge about ways of teaching, and reflected on personal practical knowledge (PPK) (Connelly & Clandinin, 1988) when provided with new information. Besides, in the cases of Pair 2 and Pair 3, some teachers learned and tried featured curricula of the sister school including the Tangram course, Water Science curriculum, and AP math. Table 2 in Chapter 6 displays the numbers of accounts in which participants talked about or reflected on each particular type of knowledge during the interviews. Since curricular knowledge is only relevant to several teachers in Pair 2 and Pair 3, I will focus on reporting teachers’ shared and learned knowledge about education system, pedagogical knowledge, and personal practical knowledge.

Since the RL project offered the first “window” towards the other’s education system, what was learned through the experience seems to have created a new image of Chinese or Canadian education for each individual teacher. Actually, teachers in the two places were impressed by many aspects, almost individually, of the other’s education system. For example, the all-subject-
teacher approach in Canadian elementary schools attracted a few Chinese teachers. One English teacher said:

“This is the very first time for me to authentically contact with foreign education. It is very different. I found that (in their system) one teacher looks after one class. I am curious to learn more about how it works. In our case, a teacher usually teaches a subject.” (CT 17, Pair 4, Interview)

While some new observations of each other’s schools and education created a new image, some observed features confirmed previous “hearsay” or imaginations of the other’s education. Shanghai teachers were also interested to learn how teachers teach and are evaluated in Canadian schools, how Canadian students learn and do assignments, how students are assessed, to name a few topics. After their participation in the sister school partnerships, quite a few Chinese participants believed that what they observed just confirmed their previous knowledge of western education since they “have many channels to learn” about it. Similarly, Canadian teachers observed some main features of Shanghai education, such as “a lot more standardized testing”, “the rigor”, a hierarchy of teachers, a high secondary school graduation rate, and hardworking teachers and students. Nonetheless, these observations also seem to verify some Canadian teachers’ previous knowledge or imagining of Chinese education. For example, one Canadian math teacher reflected:

“…it gave me the first glimpse because I had zero understanding before. Now I have some understanding. But I understand that I am just at the beginning…I think that system is extremely competitive; here it is competitive, but it is not to the same extent.” (ET 5, Pair 2, Interview).

Other than the general, factual knowledge about the other’s education system, teachers also shared and learned pedagogical knowledge through their collaboration in teaching and learning. As I have shown in Chapter 6, Shanghai teachers seem to have more learning and reflections in terms of pedagogy than their Ontario partners do. When Canadian participants mentioned pedagogies in their interviews, they often reported what they would like to export the Canadian way of teaching rather than learn from the Chinese way of teaching. After all, Canadian participants are more motivated by expected student benefit rather than their own professional
learning through the school partnerships. Based on the interview data, it seems that these Canadian ways of teaching are also of interest and appreciated by Shanghai participating teachers. Quite a few Shanghai teachers observed the differences between Canadian teachers’ teaching, which is characterized by student-centered inquiry and problem solving, and their own teaching, which more or less still features teacher-centered knowledge delivery. One Chinese elementary math teacher vividly described her Canadian partner’s teaching using the problem solving approach and compared it with her own teaching:

“…ET 8 and I shared how to teach division at one time. In terms of 2-digit division, I observed that ET 8 and I focused on very different things in teaching. When I taught, I would implement a strict teaching plan. For instance, when teaching 2-digit divisor in Grade 3, I would follow the steps of 2-digit number dividing 2-digit number, 3-digit dividing 2-digit, and 4-digit dividing 2-digit. For ET 8, she integrated her teaching in the process of students’ solving real life problems. She paid little attention to knowledge points and learning knowledge points didn’t seem the teaching goal. These real life problems were created in relation to those students in her class. Among these real life problems, there could be integer dividing integer or decimal number dividing integer…”

(CT 10, Pair 3, Interview)

This type of reflection occurred with other Shanghai teachers too. One secondary history teacher compared the ways of teaching the same history topic between her and her Canadian partner. She realized that the “fundamental difference” is the student inquiry-based learning as opposed to the teacher-centered knowledge delivery approach because “we teachers search for the literature whereas their students do (by themselves)” (CT 9, Pair 2, Interview). Another elementary English teacher reflected on her own teaching by comparing to what she observed in the sister school classrooms:

“I think their classes are more open. Their kids have more time to express themselves and teachers are willing to listen to them…in our system…it is difficult to give students as much time as they give students to talk freely. For me, I often just focus on (teaching) correct answers. It is still about content knowledge delivery.” (CT 17, Pair 4, Interview)
It seems that these Shanghai participating teachers perceive these observed Canadian pedagogies as the better ways to teach than their own teaching practices. They believe that “our system lacks of it”; therefore, they would like to adopt these practices. However, at the same time, they know that “we can’t do it here” because of the different circumstances in Chinese education. It seems that sharing and learning through cross-system conversation and observation is one thing, but to make the way into real practice is another step ahead that requires more input.

Reflection on personal practical knowledge

According to Clandinin and Connelly (1988), teachers’ personal practical knowledge (PPK) is not a property privately owned by teachers’ themselves; rather, this knowledge can be expressed and shared with other teachers and researchers. Therefore, it can be postulated that Ontario and Shanghai teachers can share, reflect on, and hence reshape their PPK in the INPLCs facilitated by the Canada-China sister school network. The evidence from teacher interviews validates this postulation. During the interviews, the first impression on each other’s education prompted participants to reflect on their knowledge. The teachers’ reflections further revealed how they internally processed the newly acquired knowledge of the other’s education. As teachers talked about their experiences of participation and learning they invoked and reflected on their PPK represented by images, metaphors, and practice principles.

Firstly, many teachers used images to compare the education in the two countries. A few Chinese teachers observed the close relationship between Canadian students and teachers; this observation created an image of “happy” school life of Canadian students. In Pair 3, CT 10 observed that Canadian students “can talk freely and openly” in their teachers’ presence while CT 11 said that she found Canadian students have a better personal relationship with their teacher whereas Chinese students experience a “very serious” teacher-student relationship with their Ban Zhu Ren. This kind of “happy” image is also observed by the on-site coordinator in another Shanghai school.

“I remember one student came to speak with the principal when we were having a Skype meeting (in the principal’s office). The student talked to the principal and the principal awarded the student with a candy after their talk. The student left the office very
satisfactorily and excitedly. I am impressed because I observed closeness between the principal and students; the student seemed very relaxed to talk to the principal and the principal looks like just one of them.” (CT 15, Pair 4, Interview)

For most Canadian teachers, their first real encounter with Chinese education seemed just to confirm some previous images such as rote learning, more drills, competitiveness, and theoretical teaching in mathematics. Nonetheless, there are also reports from several teachers who were really impressed by the new image of Chinese education that they learned thanks to the sister school network. Definitely, Shanghai education and schools are changing although they are not as “relaxed” and “happy” as Ontario schools are in the eyes of Shanghai teachers.

Through video clips from the sister school and Chinese partners’ descriptions, ET 10 in Pair 4 was “struck” by the realization that “there aren’t a lot of differences” between her school and the sister school because she observed that “we are teaching our kids skills…not just learning skills but social skills that are going to support them as they continue on in their life. They love their children just as much as we love our children…” (Interview). For the Canadian teacher in Pair 3, the information she received from the sister school completely changed the image of Chinese education in her mind.

“…my head is now filled with very different images of the Chinese education system based on the pictures that you been bringing back and the interactions (with the sister school). Their science rooms, their communal reading nooks in the hallways, books, even the outdoor spaces are just not that idea of the institutional image that I had.” (ET 8, Interview)

Secondly, quite a few Shanghai teacher participants reflected on their practical principles provided with their new observations of Canadian education. Since the two elementary school pairs have been exchanging students’ work and photos, the way in which Canadian schools treat students’ privacy and rights impressed Chinese teachers greatly. A few Chinese participants talked about this matter and said they definitely learned something out of the experience. The following thought is representative.

“(we also learned) the consideration of respecting students’ privacy when transmitting photos. We didn’t seem to pay attention to this matter before. We didn’t need to request
Several Chinese teachers expressed their belief that Canadian ways of teaching might work against their practical principles fitting in the Chinese context. For example, comparing to student-centered teaching in the sister school, two secondary school teachers reported an unwritten rule Shanghai teachers have to follow in order to prepare students for Gao Kao.

“…we think more about other educational needs for students in grade 10 and 11 whereas we have to shift to Gao Kao preparation in grade 12…(only in grade 10 and 11) to make our class teaching more interactive and interesting we use methods other than chalk-and-talk…like student inquiry on some certain topics.” (CT 9, Pair 2, Interview)

The practical principles that Shanghai teachers invoked can be understood against the current situation and environment of Chinese education. Actually, many standard-based tests and examinations and big class size are still prominent features of Shanghai school education. One secondary school teacher CT 5 expresses his belief that good mathematics teaching should balance delivering content knowledge and cultivating ways of mathematical thinking. However, he is restricted by the “baton” of Gao Kao although he observed from his Canadian partner’s teaching that this balance can be achieved through daily teaching. Elementary teacher CT 10 reflected that her authoritative way of teaching is “good from the perspective of efficiency” although she sees it is not helpful to cultivate creativity. Similarly, another math teacher thinks that her students “would be in chaos” if she borrowed the student-centered inquiry-based way of teaching.

“(the) notes of (her) teaching are helpful. They offered us an opportunity to observe each other’s regular class teaching…(but) I felt that I wouldn’t be able to control the class if I used her way of teaching…If my students were taught in that way, they would be in chaos.” (CT 11, Pair 2, Interview)

Thirdly, teachers also used metaphors in their reflections on the differences between Chinese and Canadian education. One Canadian teacher imagines the difference between Chinese and Canadian education is like two positions along the trajectory of a pendulum moving from “very
strict” to “children talking and interactive” (ET 9, Pair 4, Interview). One elementary Chinese science teacher compared his teaching in his science class and in an Inquiry Curriculum (IC) course with his all-subject Canadian teacher partner’s classroom teaching. He felt that his own teaching is like “sprinkling pepper seasoning” because of the limited teaching hours per week whereas his partner can “focus on her 20 something students” since she is always “with the students in the classroom for a long time” (CT 13, Pair 3, Interview). CT 10 in Pair 3 also reflected on her own knowledge-delivery teaching by comparing with her Canadian partner’s inquiry-based teaching. She thought her own teaching is like “battling in corps” in which “certain knowledge points must be taught and learnt” at certain time whereas her Canadian partner’s teaching is a “guerrilla warfare” because “they are not in a hurry” and “they would come back to a certain point that had been discussed” a few days later (Interview). These interesting metaphors helped teachers make sense of the teaching on the other side.

Shanghai teachers’ dissonances

Comparing to Ontario participants, it seems that Shanghai teachers more likely experienced challenges and dissonances as to their practical principles and existent knowledge in the face of new information from Canadian sister schools. In interviews, Chinese teachers talked about perceived challenges and dissonances more than their Canadian partners did (See Appendix J). Actually, based on the interview data, only four Canadian participating teachers mentioned their minor dissents about the current Canadian education when they talked about their observation of Chinese education. Moreover, these small dissonances do not necessarily challenge these Canadian teachers’ current practice. For instance, elementary teacher ET 9 said that Canadian education “did a great job of helping children feel good about doing badly” and “doesn’t do a great job of teaching skills and knowledge” (Interview). Similarly, secondary teacher ET 2 reflects that: “we need to put more into our curriculum. The kids need to learn more. I think that by seeing what’s happening in China, we can become aware of how little our students know compare to the Chinese kids” (Interview). For many Chinese teachers, however, the newly learned or verified knowledge of Canadian education or western education created real challenges related to their current knowledge, practices, and beliefs. These observed pedagogical disparities or other differences between the two education systems prompted some Shanghai teachers to critically reflect on their own practice.
“Now our kids are very tired and out teachers are tired too. We see they (sister school students) are happy and relaxed in classrooms. We need to reflect on this difference. We can’t just bury our heads in the current work and finally achieve something satisfactory through a painful process. We might be able to find a way to enjoy what we are doing and equally achieve the same results.” (CT 2, Pair 2, Interview)

“…for example, student privacy…Now we realized that we should raise our awareness in this regard. We are just starting to have this kind of regulations and awareness in China; but we don’t really follow. To my surprise, they seem to implement the regulation very strictly.” (CT 16, Pair 4, Interview)

Moreover, based on their reflections during the interviews, it seems that many Shanghai teachers are somewhat unsatisfied with the current situation of education. They expressed a willingness for change; however, at the same time they realized that the obstacles in the system preventing change might be unsurmountable. Especially, it is worth pointing out that Shanghai secondary school education seems to be much more examination oriented than the elementary education. In the two secondary pairs, all Chinese subject teachers reported the dilemma they face between the restrictive reality and these new observations in the sister school partnerships. For instance, the Chinese IT teacher in Pair 1 wonders why Canadian students in the sister school “can be so engaged” in using technology to learn whereas the students in his own school “are not excited about using tablets” (CT 1, Interview). Ironically, the Shanghai high school does provide a comprehensive online platform and a lot of online resources for student learning; however, all the resources seem to be designed for test and examination preparations. Similarly, in Pair 2, one physics teacher (CT 6) complains that his students are not “engage in autonomous learning” due to the lack of connection between classroom learning and real life problems. From his observation, problem solving is exactly the approach that his Canadian partner uses. One math teacher provides a similar account too: “They (Canadian math education) require the thinking of modeling. In our Gao Kao, all questions are abstract. Our students don’t need to deal with the modelling because math models are provided” (CT 4, Pair 2, Interview). One history teacher felt her teaching is “utilitarian”, referring to the approach of Gao Kao preparation. She then lamented that: “We need to develop towards their approach; however, it is a long way to go” (CT 9, Pair 2, Interview).
Practice

Current practice as the ground or constraint for change

It is evident that teachers in both countries prefer to incorporate the activities of the INPLCs into their current work. In Pair 1, the proposed student exchange program is considered as an extension of an ongoing Mandarin program by the participating Canadian teachers; in Pair 2, Canadian teachers shared their ongoing classroom teaching with Chinese teachers while Chinese participants tried to connect with their partners’ practice using existing or newly developed Extended Curriculum (EC) courses. For instance, CT 5 used his EC course about TI calculators as the point of collaboration with his Canadian partner while CT 4 opened a new EC course about AP math. Similarly, CT 7 said that he would like to open an Inquiry Curriculum (IC) course on “physics in real life” in order to collaborate with his Canadian partner since he believes that it is impossible to “change anything in what we teach in regular classes because the target is still Gao Kao” (Interview). In the two elementary pairs, both Chinese schools linked their featured educational programs of their schools with their partner schools. In Pair 3, the Chinese side presented the sister school its established tradition, practice, and achievement of water science education. In Pair 4, participating teachers and principals purposefully linked sister school activities with its longitudinal pursue of International Understanding Education. The onsite teacher coordinator of the sister school project elaborates:

“Our school emphasizes International Understanding Education (IUE) and we conduct a study about it. English is also a feature of our school. (Therefore), we hope to broaden channels towards international exchanges…The (IUE) curriculum is divided into sub-learning activities such as…”Going to America”…we hope that students can learn more and more knowledge of traditions and cultures of all the places.” (CT 15, Interview)

The participating teachers in the two Ontario elementary schools creatively designed the content and activities for their ongoing classroom teaching and learning in a way that can collaborate with their sister schools. ET 8 taught according to the Ontario math and science curriculum when she collaborated with the sister school while ET 9 and ET 10 taught writing and social study
when they partnered with the sister class in Shanghai. One of these teachers reported referring to
the pen pal activity and movie commentary activity:

“We use part of our writing program. Children in grade 6 have to be able to write in a
variety of purposes. Certainly communicating, writing letters, and communicating with
emails electronically are expectations of our writing program. In social
studies…developing understanding of the global community…similarities and
differences between our country and other countries, how Canada is viewed on the world
stage…” (ET 9, Pair 4, Interview)

Comparing Shanghai and Ontario schools, different curriculum structure and organization of
teaching and learning result in different approaches to linking sister school collaborations to
classroom activities. In the current Shanghai curriculum structure, there are three types of
curriculum, namely Basic Curriculum (BC), Extended Curriculum (EC), and Inquiry Curriculum
(IC). While courses in BC take up most time in the school schedule EC and IC courses usually
meet students only one or two periods per week in a hope of cultivating additional learning
interests. Due to the new curriculum structure, the extra-curricular activity does not seem to be a
practical idea in Shanghai schools since everything can be made into the curriculum, whereas
Ontario teachers can clearly put a line between the curriculum teaching and extra-curriculum
activities. Thus, for Ontario teachers, they either chose to incorporate the sister school
collaboration into their current curriculum teaching or just regard it as an extra-curricular activity.
For Shanghai teachers, they had to switch their attention to EC and IC courses because they
found it is impossible to connect the sister school collaboration with existing BC courses. The
rigidness of the BC subjects just makes it is “hard to move things around”.

For instance, in the elementary school Pair 3, the water education project became a collaboration
between the Canadian teachers’ teaching of regular science curriculum and an IC course in the
Shanghai sister school, which only meets selected students across classes one hour per week. In
the secondary school Pair 2, the Eco-school student club is regarded as completely extra-
curricular in the Canadian school whereas it was expected to become a school-based IC course in
the Chinese school. In the same pair, the two collaborations in the area of mathematics are both
between the regular curriculum teaching in the Canadian school and EC courses in the Chinese
sister school. Actually, the Chinese school leaders in Pair 2 also sensed that EC and IC courses are the “only area where we can do something” with respect to the sister school collaboration due to the rigidness of BC courses in Shanghai secondary schools. The on-site coordinator in the Chinese school said:

“We want to find some useful content or materials that can complement our teaching through international exchanges. We cannot overturn the existing Chinese curriculum and textbooks; but we can explore in EC and IC classes.” (CVP1, Pair 2, Interview)

Perhaps Ontario secondary school teachers also face non-negotiable curriculum requirements that are similar to some extent with what Shanghai experience. For instance, one teacher who is the math department leader reports that due to “a designated curriculum given to us… I don’t know (if) we are allowed to do outside from that” (ET 4, Interview). This concern might partially explain why these Ontario secondary school teachers were not able to incorporate the sister school collaboration into their current teaching activities. However, the extent to which Ontario elementary teachers can manipulate the curriculum is quite different. Opposite to Shanghai teachers’ perceived rigidness and the impossibility of altering their teaching in BC courses, Canadian elementary teachers report “liberty” to “bend the curriculum”. The way in which Canadian teachers incorporated the sister school activities into their ongoing teaching practice truly shows the freedom they enjoy when they implement the curriculum. Moreover, Canadian teachers are aware of and embrace this kind of “liberty”, which creates a favorable condition for their participation in the Canada-China INPLCs. Two elementary teachers in the two Ontario elementary schools described their similar understanding and approach of curriculum implementation.

“We have obviously the big ideas and expectations of the curriculum document. But our curriculum expectation, especially in science and social studies are more umbrella like expectations. It allows teachers to follow the inquiry-based learning.” (ET 8, Pair 3, Interview)

“Oh, quite a bit (autonomy)… obviously we have curriculum to be covered, but if we talk about (for instance) social justice issues, we start to talk about child poverty, I think it would be very easy to start doing some research about what are experiences for children
in China. You can continually connect in some way to our sister school…we’ve got flexibility in how we go about incorporating that into their learning. (ET 10, Pair 4, Interview)

Obviously, on the one hand some features of the current practice in these schools in the two places provide the ground for change; on the other hand, the existing domestic teaching and learning requirements also constrained the partnership’s impact on teachers’ practice. For Canadian participants, they in fact did not feel obliged to apply anything into their existing teaching practice unless they became personally interested in modifying their teaching for the benefit for their students. As I showed before, student benefit is the most important motivation for Ontario teachers’ involvement in the international initiative. Also, they do not have as much pressure from their principals as Shanghai teachers do. Although those Canadian participants who have not taken the sister school partnership into the practice level also expressed their wishes to “do(ing) a project” (ET 2, Pair 1, Interview) or “work them into…classroom activity” (ET 7, Pair 2, Interview), their existing responsibilities or the progress of sister school activities have not permitted them to implement these ideas yet.

For Shanghai teachers, the dissonances and dissents they underwent because of the learning in the Canada-China INPLCs do not necessarily lead to practice change. They seem to run into more constraints for change than their Canadian counterparts do. While these Ontario elementary school teachers reported some autonomy in terms of manipulating the curriculum in a way that accommodates sister school activities, Shanghai teachers found that they were “not able to do these things” because of unsurmountable systemic constraints. After all, what Shanghai teachers learned through the sister school partnerships, such as problem solving, inquiry-based learning, student-centered teaching, and all-subject-teacher, are not the mainstream practices in Chinese schools. The dilemma that Shanghai teachers face is that on the one hand they have a lot of opportunities, including the Canada-China sister school network, to learn these western practices, while on the other hand the current circumstance of Chinese education does not seem to allow them to apply too much. For example, one science teacher complained that his IC classes have too many students and too short teaching time per week so that he could not sufficiently guide students’ inquiry (CT 13, Pair 3, Interview). One Ban Zhu Ren believes that the all-subject-teacher approach of teaching “can teach in a more comprehensive way” and that teachers “may
have more flexibility” in educating students. However, she knows that she “can’t do this here” because of the existing way of organizing classes in Shanghai schools (CT 16, Pair 4, Interview).

Particularly, for Shanghai secondary school teachers, the high pressure of Gao Kao and students’, parents’, and school administrators’ expectation of high examination scores constitute the “current educational environment” in Shanghai that prevents teachers from innovating even though they learned something and had some “thoughts” or “realizations” owing to the Canada-China INPLCs. For instance, one math teacher states that “no one would dare to experiment with innovations in regular classes” because “BC courses are directly linked to Gao Kao” (CT 5, Pair 2, Interview).

“(I) do have some realizations (after sharing with the sister school). But (I) can’t jump out of the Gao Kao system. Within the system, I have to attach much importance to test scores. I have to have students pay attention how to apply knowledge in exams instead of real interest on learning.” (CT 6, Pair 2, Interview)

“For Chinese students, history is a minor subject…(it is) not counted in Gao Kao result. It is impossible for them to spend time outside classroom…Canadian students seem to write a research paper outside classroom…We couldn’t do it here”. (CT 8, Pair 2, Interview)

In addition, the school administrators of these Shanghai schools did not seem to expect too much change out of the sister school partnerships either although they expressed their interest and support all the time. For instance, the VP of the Chinese school in Pair 2 resonated with her teachers that linking sister school activities with the teaching and learning in BC courses is “impossible” given the current educational circumstance in the school and in Shanghai. Actually, the school administrators of the two Chinese elementary schools also expressed a similar opinion. They believe that teachers’ participation in the international school network is more for broadening horizons than for “immediate outcomes” as to the current teaching and learning (CVP 3, Pair 3, Interview) and that teachers’ involvement could “enable them to broaden their view of education and learn new ideas” as far as teachers’ professional growth is concerned but would not “directly impact or improve their current teaching” (CP 4, Pair 4, Interview).
Impact on practice

Given the aforementioned conditions and constraints for substantive practice change, there are two ways in which the participation in the Canada-China sister school network influenced teachers’ current school work. First, some teachers took immediate actions because of the exchanges and collaborative activities in the Canada-China INPLCs since essentially these activities were designed to be linked with teachers’ practice in one way or another. Except Pair 1, where the two initiatives of the partnership were not carried out successfully, other three school pairs all witnessed additional educational activities or curricular elements as a result of their participation in the sister school network. In Pair 2, one math teacher (CT 4) opened a new EC course in the Chinese school given the support from his Canadian partner (ET 5). An AP calculus textbook alongside an exercise book was delivered to Shanghai after ET 5 briefly introduced CT 4 the AP math course in her school. The AP math EC course was opened to some interested students in the Chinese school during one semester; however, this experiment did not continue after the semester. In the interview, the teacher who taught the course talked about his experience.

“I had never taught in English before. I first needed to learn those math terminologies...I needed to check them up. I asked English teachers…AP calculus seems to me places much weight on application. There are many problems related to real life experience…To make it useful for our students…we must connect it with our domestic curriculum. Teaching all in English is not applicable. Also, we might have to use our way of teaching; at the same time, we borrow their application problems.” (CT 4, Pair 2, Interview)

On the other side of Pair 2, one social studies teacher (ET 3) took the advantage of the partnership and made a student survey on gender norms into a comparative project by bringing in Chinese students’ perspectives. In addition, at the beginning of the third project year, one math teacher (ET 5) also started incorporating one TI calculator task that she learned from CT 5 into her teaching (Project Communication, February 3, 2016).

In Pair 3, the participating teachers on both sides picked up what they needed out of their exchanges and incorporated what they learned into their practice. The Chinese school was
“inspired by the sister school” and “organized a very big Christmas celebration” after the Canadian school shared their experiences of celebration. The principal and several teachers talked about this “big” event during their interviews. The English department of the Shanghai school took responsibility for planning and organizing the school-wide event; a big Christmas tree was made using recycled materials by involving the science department of the school; and parents were invited and one of them played the Santa Claus. One Ban Zhu Ren felt it was “easy to participate” in this kind of event linking to the sister school partnership because she could easily “combine the project into the existing work” (CT 12, Interview). The on-site coordinator in the Chinese school echoes:

“As such, the sister class activities become part of the existing education. For students, this new element increased their sense of responsibility attached to their learning. At the same time, they learned some new things…” (CT 14, Pair 3, Interview)

On the Canadian side of Pair 3, the sole Canadian teacher proactively adopted and adapted what she learned from the sister school. She firstly designed a math teaching unit by incorporating an innovative type of Tangram that she learned from one of her Chinese partners (CT 11). She managed to purchase several sets of the Tangram and used them in her teaching to help students “to explore geometrically different shapes and regular shapes, commonalities and differences with different diagrams, and then did some artworks on those” (ET 8, Interview). Subsequently, she shared her teaching and students’ learning with her Chinese partners. Following the Tangram activity, she continued to embark on another larger and longer teaching unit that was inspired by the water science education of the Chinese sister school. With the assistance of several RAs and volunteers, she taught a full unit of science curriculum around the water theme. Inspired by an “amazing” water exploration center in the sister school, her classroom was decorated to become a watery wonderland in order to highlight the learning theme. Students were assigned to groups and each group was asked to conduct a unique learning project on water. Students then had opportunities to present their designs and findings not only to their classmates but also other classes in the school and some students from a neighbouring school. At the end of the water science teaching unit, the two schools managed to organize a summative videoconference for students through Skype. During the culminating learning activity, students in the two schools jointly explored a water shed in the Chinese side and worked on some experiments about the
surface force of water. The Canadian teacher talked about his realization in her interview, and her principal was obviously impressed by these efforts she made and by the impact of these activities on both students and teachers.

“…having them put that event on for the school, the idea that the Grade 4 and 5 students (in this school) have that water culture of the sister school, and (that) what can we do for our school…sort of emulating that learning here.” (ET 8, Pair 2, Interview)

“…I think our kids did get something out of it…They are getting higher thinking skills…I think my teacher got something out of it because she was constantly learning and adjusting things so that the collaboration and partnership would grow…I think some teachers now want to get involved, because there are a lot of things came out of this.” (EP 3, Pair 2, Combined Interview Excerpts)

In Pair 4, several participating teachers reported modification of their teaching too. For instance, the movie commentary activity designed by the Canadian side was supposed to accommodate the collaboration between the two partnering schools on the one hand and to fulfil the Ontario curricular requirement of media literacy on the other hand. One of two Canadian teachers explained why she and her teaching partner (ET 9) chose to teach the movie commentary as the collaborative activity.

“Honestly, it was because we are doing this partnership. We need something that we could both do. We did commercials, we did radio, and I guess we could do something using the internet. But this (movie) is something kids are wanting to do, they love movies, so they will be engaged right away, and something that we can both do.” (ET 10, Pair 4, Interview)

For the Chinese side of this pair, there is evidence of some impact on teaching practice too. The pen pal activity influenced one Chinese English teacher’s (CT 14) teaching because she was impressed by Canadian students’ “little poems” that were shared by her partners. Consequently, she wanted to encourage her students to write little poems in English. The principal of the Chinese school also mentioned in her interview that her students were asked to write descriptions for their traditional Chinese art works because they would exchange them with the sister school.
She believes that students needed to research and learn more about their own culture before they could present their works to others; and therefore writing these cultural descriptions is an additional learning opportunity for students in these art classes. In fact, the Canadian side also adopted this creative idea and practice when they exchanged back students’ art works at the beginning of third project year.

Second, the participation in these Canada-China INPLCs may impact teachers’ thinking about their work although substantive changes in practice may not have occurred. Quite a number of participating teachers have not taken any concrete actions in a way that modifies their current teaching practice or educational activities under their supervision. They just have not had the chance to bring their participation to action level due to their pressing domestic responsibilities or certain organizational reasons in the school network. Several of these sister school activities just had not reached that implementation stage yet before they had to stop or pause; and several teachers’ motivation to engage in the international venture was reduced or had never been strong. In any event, according to the literature practice change resulting from professional learning in PLCs is not easy to achieve. Regardless of these setbacks, the impact of the experience on some teachers’ view of teaching and education is still not negligible. For example, one Canadian teacher said that she would do “something where is truly cross-cultural at student level” if conditions permitted (ET 7, Pair 2, Interview) while one Chinese teacher reported that she “developed a higher standard of work” so that she could share the work with others (CT 11, Pair 3, Interview). The following are two more examples of this sort.

“Speaking of my teaching in BC classes, I would like to make more practical links for my students when we talk about certain math topics. Probably I can transmit this way of thinking to my students so that they wouldn’t be confined with pure theoretical mathematics.” (CT 3, Pair 2, Interview)

“I think we can learn from each other. I think that her (ET 8) way of setting up class rules in advance is very good. I can incorporate her approach into my thinking of my work although I still believe that laws and rules are also based on people’s relationship.” (CT 10, Pair 3, Interview)
Potential pedagogical shift and student growth

As far as teachers are concerned, improving teaching and benefitting students are their central concerns since they are motivated to be involved primarily by the two factors. The teachers who made substantive modifications in their practice provided evidence of potential pedagogical changes in these classrooms. Most evidently, the way of teaching and learning in these classrooms is shifting towards a pedagogy involving international learning partners. The comparative study survey and a postponed joint student work competition using TI calculators in Pair 2, the water science project in Pair 3, and the movie commentary and pen pal activities in Pair 4 are all this sort of examples that demonstrate how Ontario teachers managed to bring their students Chinese learning partners in the sister schools. This pedagogical shift not only brought a “global view” into these classrooms but also facilitated student collaboration in an international setting.

“…in some ways my perspective and purpose for teaching has grown bigger as a result of it all. I think I feel now more driven towards the idea of collaboration within a classroom and between schools, between countries and also having a far more environmental (perspective)”. (ET 8, Pair 3, Interview)

“I really want them to get something out of the movie, but also get something out of reading what their pen pals had said about it. It was very purposeful…It would be nice then following the pen pal letters and actually having the kids to talk to each other about it.” (ET 10, Pair 4, Interview)

On the Chinese side of these partnerships, teachers and school administrators also reported on how the way of teaching and learning in their schools is influenced by the sister school activities. For instance, the Chinese principal in Pair 3 observed that one of the participating teachers combined some sister class activities into her existing student learning activity series and hence studying traditional Chinese festivals became a collaborative activity involving the Canadian sister class. In Pair 4, the on-site coordinator in the Chinese school observed a similar pedagogical shift in teaching the school-based International Understanding Education curriculum.
“Now with sister class, our students have a new sense of responsibility because they need to describe the holidays for their friends in the sister school. Our students now prepare the holidays with a clearer purpose.” (CP 3, Pair 3, Interview)

“…before we introduced some general information of certain places around the world... Now, we realize that cultures of foreign countries can also been learned through direct communication and collaboration between students. Students are more engaged in the second approach in which they don’t learn things superficially.” (CT 15, Pair 4, Interview)

Especially, those participating Shanghai math teachers implied another kind of potential pedagogical change in their interviews. Among all the Chinese participants, there are three math teachers in Pair 2 and two math teachers in Pair 3. After these math teachers observed their Canadian partners’ teaching, which is characterized by problem solving and student inquiry-based learning, they attempted to adopt this way of teaching and learning in their own classrooms. In Pair 2, CT 3 would like to “make more practical links” in his teaching of BC courses while CT 5 would pay more attention to problem solving. CT 4 also reported he tried to design a “project assignment” inspired by his Canadian partner’s teaching; however, his attempt was held back by the school administration because the school required him to “test the student” at the end of the experimental AP math course. The two elementary math teachers also talked about their realizations about the way of math teaching. CT 10 said that she is trying to provide her students with “a relatively casual learning environment” and encourages her students to express own thoughts in classes. CT 11 reported that the sister school partnership actually influenced her teaching to some extent and she observed a good effect: “In the process of teaching or sometimes before teaching, I would like to leave students some time for their thinking and doing independently. I observed that students have deeper understanding…” (Interview).

Those aforementioned additional curricular elements and teachers’ pedagogical modifications resulted from in the Canada-China INPLCs may bring about changes of student learning in a way that benefits those involved students. In their interviews, Chinese and Canadian participants talked about their observations of students’ growth as a result of their involvement in the sister school activities alongside their teachers. Firstly, students may improve their global competence.
Global competence, according to a document published by the Asia Society, can be defined as “the capacity and disposition to understand and act on issues of global significance (p. xiii)”, and it contains four core elements including abilities of investigating the world, recognizing multiple perspectives of self and others, communicating ideas, and taking actions to improve (Mansilla & Jackson, 2011). Noting that many topics of these sister school thematic activities are about current issues in the rapidly changing interconnected world, students’ learning obtainment on global competence is obviously relevant and important. In Pair 2, the two principals reported a common observation after the student environmental groups in the two schools interacted through Skype.

“…when they did Skype conference…, they were excited, they were thrilled, they were highly motivated. And it’s just amazing to see my students…can do something together with another group of students that are so far away…it’s inspiration for them to become global citizens”. (EP 2, Pair 2, Interview)

“For students from the two sides, they not only enlightened each other on how to do the project but also inspired each other since they see other people across the pacific doing the same things. It increases their confidence.” (CP 2, Pair 2, Interview)

In Pair 4, the two Canadian teachers chose Avatar for the movie commentary activity because they thought the theme of movie, which is about human conflict and the use of natural resources, is relevant to developmental issues in contemporary China and the world (Project Meeting minutes, April 2, 2015). In their interviews, both of the two Canadian teachers reflected on their students’ growth after students participated in the sister school activities. Both of them believe that students gained skills to make connection and communicate with Chinese students and that in the process they improved understanding and appreciation of the other people and culture. Particularly, one of them believes that being involved in this Canada-China school partnership made his students non-judgmental when they look at China because they are able to “see the country more holistically”.

“(students in) both schools recognized kindness, generosity, determination, trust, and strong characters, all of these great characteristics (in the movie). That was important for
our students to see that our values in education component and in character development and that strength in people are similar in both schools.” (ET 9, Pair 4, Interview)

The Chinese side of Pair 4 also reported observed student growth. The Ban Zhu Ren of the sister class (CT 16), her assistant homeroom teacher (CT 17), and the on-site teacher coordinator (CT 15) in the Chinese school all talked and were excited about their observations in their interviews. The on-site coordinator summarized the experience in the following way:

“I feel that the project pushed our kids to change. At the beginning, our students felt that it would be very hard to communicate with kids in a Canadian school due to huge differences. As the communication went along, they don’t worry about difficulties any more…Our students are more open to express their thoughts and their view is broadened. This is the most excitement I feel.” (CT 15, Pair 4, Combined interview excerpts)

The two teacher partners in Pair 3 who have been working on the water science learning activities share this kind of excitement for student growth. Referring to the summative student videoconference on water science between the two schools, CT 13 observed that his students “really enjoy the event because they had the opportunity to communicate and collaborate in depth with students there” (Sister School Meeting minutes, September 1, 2015). His Canadian partner observed her students’ similar gratification owing to the internationalized learning experience:

“…that really validates some of the project work that they (her kids) had done. And I liked how seriously all the children took it…they became less aware of the fact that they were being watched doing it and more focused on the doing of it...” (ET 8, Pair 3, Interview)

Other than global competence, students may also learn cultural knowledge when they participate in the international sister school partnerships alongside their teachers. This observation is more evident in the two pairs of sister elementary schools. That both of the two Canadian elementary schools have many low income new immigrant families not only motivated these Canadian teachers to participate in the first place but also made teachers and students especially appreciate the international learning opportunity. Low income new immigrant parents are usually “working
really really hard” or “working two, sometimes three jobs”. Therefore, they are not “able to be as involved in the school” (ET 8, Pair 3, Interview), not able to spend “a lot of time at home with their children”, or do not have time to take kids “to different parts of the city…even though we have a very multicultural city” (ET 10, Pair 4, Interview). The Canada-China school network broadened these Canadian students’ cultural horizon as they “asked lots more questions about China and about school” when they interacted with Chinese students and teachers in the sister schools. Similarly, CT 12 in Pair 3 also reported that most student in her class are “from migrant workers’ families”, which implies low socioeconomic status in the Shanghai context. She was glad to see her students, who “might not know Canada before”, learn something about the country such as Easter Holiday and the city where the sister school is located. For the kids in the Chinese school in Pair 4, who are from a relatively affluent community, they also learned Canadian culture and schools through the partnership. This cultural learning is regarded as an extended element of the International Understanding Education curriculum of the school according to participating teachers’ understanding.

Cosmopolitan teacher professional identity

Evidence of cosmopolitan awareness

The teacher interview data suggest that the teachers who participated in the Canada-China sister school network demonstrated cosmopolitan awareness to some extent even before they started these INPLCs. Indeed, Ontario and Shanghai teachers’ view on teaching and on the profession as a whole has been impacted by the rapidly changing interconnected and interdependent world. The awareness of the flattened globe is already one part of these teachers’ professional identity that shapes who they are, how they teach, and what they choose to learn. Arguably, having this kind of cosmopolitan awareness must be another important reason for these educators in the two places to participate in the INPLCs in the first place, in addition to other contributing sources of motivation. Therefore, as far as the research is concerned, the question is not only about how teachers’ professional identity is reshaped by the experience of cross-system professional learning but also about how these Canadian and Chinese educators participate as they think globally.
The interview data reveal that Ontario and Shanghai participants share two prominent characteristics related to cosmopolitan professional identity: the sense of belonging to the global community of education and open-mindedness towards the outside world. Firstly, many teachers in both places demonstrated a sense of belonging to the global community. Owing to the globalization characterized by convenient international travel and migration, easy accessibility of information through media and the internet, and advanced technology, teachers experience and observe their schools operate, their students learn, and themselves teach in a global community. Within this global community of education, teachers have many opportunities to be exposed to education from around the world. For Shanghai teachers, they have been learning about western or world education through a variety of professional learning opportunities.

“I learned about foreign education by reading books. Descriptions of foreign education in TV news and talking TV programs also help me learn about foreign education. Also, our school district used to invite a group of excellent American teachers to give lectures for us”. (CT 12, Pair 3, Interview)

“The school often sends teachers overseas for study tours. They brought back feedbacks. I also had chances to visit Hong Kong and Australia and looked at their education”. (CT 18, Pair 4, Interview)

For Ontario teachers, although they do not seem to have much exposure to Chinese education, it does not mean they do not have access to the information of other places around the world given the convenient internet and international travels. Actually, six out of the ten Canadian participating teachers were born outside Canada; therefore, their own immigration experiences, family backgrounds, and past educational or professional experiences already made them global citizens in a sense. Moreover, Ontario teachers found their schools are no longer local because of international or immigrant students. As one teacher described it: “The world is coming to me. It is interesting because I have to be sensitive to that” (ET 7, Pair 2, Interview). This phenomenon is also true for other Ontario teacher participants as they are all teaching an increasingly diverse student population. Indeed, the social field of teaching and education is changed (Luke, 2004) as teachers receive information about and for education from around the world through various
sources. These professional and learning experiences enable these teachers to identify with other teaching professionals internationally.

“I came from Sri Lanka. Our curriculum is kind of British background. It is mostly concepts, like deep concepts, quite similar to other Asian countries (including China).” (ET 4, Pair 2, Interview)

“You can say that they are off and another country. But it is not really because it is a global community—we travel, we exchange ideas, and so on. So you have to make efforts to live with people who have different points of view”. (ET 9, Pair 4, Interview)

As a result of the sense of belonging to the global community of education, teaching for these teachers is no longer a local business. Rather, it becomes a profession that must contain a global view and sometimes needs to involve international sharing and collaboration at the school and classroom level. To this end, “this kind of school-to-school collaboration can be very helpful” because “with this connection, the school will no longer do education by closing its door; rather it can see what others are doing” (CT 11, Pair 3, Interview). This door hence leads to “different approaches and ideas from the sister school that can stimulate us to reflect on our teaching and in turn change or improve our teaching” (CT 2, Pair 2, Interview). Especially, for these Ontario teachers whose primary concern is student benefit, they see this sister school work as a kind of preparation for students’ future life in the globalized world through relationship building or ability and awareness cultivation.

“…people do move, do change countries…so we have to try to develop our students to the best of our abilities so that we prepare them for the society here in Canada and in a more international context.” (ET 4, Pair 2, Interview)

“…we are looking at globalization and working together as an international community…That was what we were trying to do… Since environment is a global issue, it's a great one to be partnering with them on.” (ET 8, Pair 3, Interview)

“I really do believe that we are really one. And how are we supposed to develop that (belief) for our children? Well, develop it through understanding, through relationships. So, that to me is the most important thing.” (ET 10, Pair 4, Interview)
Secondly, it is also evident that in the global community these participating teachers are open-minded towards the things outside the professional and cultural boundaries. Teachers do not consider or judge their own education and others’ education from a local point of view. Instead, they welcome new information and insights and they are disposed to innovate and change in order for improvement if conditions permit. During Ontario teachers’ interviews, they talked about why they should look at others’ “best practices”, how they “went on the internet to look at different curricula”, and how they approach new knowledge and skills outside their boundary such as “Japanese lesson studies” and the Chinese students’ learning achievement. During the Chinese interviews, teachers reported how they felt obliged to learn from outside the boundary because Shanghai education started urging them to “take a broader view of students’ growth and shouldn’t only focus on their scores” (CT 16, Pair 4, Interview). They felt that they have to “know how other countries are doing… how other schools do” (CT 2, Pair 2, Interview); and they are disposed to “borrow” and “use them” if applicable knowledge and skills are identified. The following two interview excerpts represent the open-mindedness shared by these participants in the two countries.

“I have an influence on their (students’) character, helping them make good choices, and become good people. So when I look at that, these are also areas that I can probably learn something from someone who is teaching in another place in the world who faces a different political system, faces a different academic system, and faces different environmental challenges.” (ET 7, Pair 2, Interview)

“I see internationalization as a trend in the current world. I think if we only stick to our own way of education, the education is not complete. We must absorb advanced thoughts of education from overseas. We teachers shouldn’t close the door and do our own education blindly. The purpose of doing this is to better our education. We are educating students who will be able to enter the world stage. To this end, we teachers need to be open-minded towards the world at first.” (CT 15, Pair 4, Interview)

Certainly, there are disparities among participants in terms of cosmopolitan awareness. However, it is clear that the difference is not about who are or are not aware of the global education arena; instead, it is about to what extent a teacher demonstrates cosmopolitan awareness in the mixture
of local and global professional identity. Probably, this difference has in part contributed to the
divide between those who took innovative curricular initiatives in responding to the new
knowledge learned through the Canada-China sister school network and those who did not.
Indeed, for all these teachers who participated in the Canada-China INPLCs, they have already
taken a step further than other teachers in their schools and systems and “put their professional
identity on the line” (Mitchell & Sackney, 2001). While the local responsibility is still reasonably
teachers’ main concern, some of the participants sensed an obligation to take action now globally;
and therefore they proactively reacted to the opportunity that the sister school partnerships
brought to them regardless of many conceivable obstacles. For some others, however, they dared
not make any changes to their local practice for a range of understandable reasons. Clearly, it is a
negotiation between these teachers’ local and cosmopolitan professional identity. As the result of
this global-local negotiation, some think “with the students in Shanghai I want that sort of
interaction (now)” (ET 8, Pair 3, Interview) whereas some others believe “our first goal is
local...we can’t think globally unless we get these goals honed first” (ET 6, Pair 2, Interview).
The difference in weighing the local and global identity also in turn determined how one teacher
receives the alternative cross-cultural professional learning opportunity and how much he or she
would be influenced with respect to knowledge, practice, as well as the professional identity
itself.

Reshaping teacher professional identity

The literature shows that participation in professional learning, particularly the learning in PLCs,
may build or reshape teachers’ professional identity. Generally speaking, teachers’ interview
data in this study confirm this result from the literature. In the Canada-China teacher INPLCs,
participants on both sides put their knowledge into a new perspective and pushed their
professional boundaries further. As teachers in the two places engaged in INPLCs, they not only
had opportunities to exchange ideas and observe practices but also collaborate on real teaching
and learning activities involving their students. It is these authentic professional learning
activities in the international setting that have an impact on teachers’ professional identity.

Some participants, mostly elementary school teachers, demonstrated an increased sense of
belonging to international professional learning communities. For example, in Pair 3, where
teachers in the places have been collaborating for the longest time among these school partnerships, one Chinese science teacher obviously empathizes with his Canadian partner as to the sense of belonging to the international professional community. They reflected on this feeling in their interviews respectively.

“…through the collaboration, I sensed that the teaching knowledge of water and on the awareness of water is not only restricted within one school. It is a global thing… I was feeling a sense of accomplishment because the event (water week) that I organized could bring some influence to a teacher on the other side of the globe.” (CT 13, Pair 2, Interview)

“I was part of it…I didn't do it all…so it's about redefining my learning community outside of my school. What I do is very different (from others in the school) but it is just not what everyone else is doing.” (ET 8, Pair 2, Interview)

Another teacher in Pair 3 who shared her math teaching with the Canadian teacher also mentioned the similar kind of belongingness to the INPLC. She recalled that she was “always feeling there was someone sitting in my class” because she needed to share her teaching with the sister school and this feeling urged her “to do it well so that I can share” (CT 11, Pair 2, Interview). In Pair 4, the on-site coordinator in the Chinese school (CT 15) was very excited when she could identify with Canadian educators’ student-centered approach to education while one English teacher feels gratified because now she is able to “make contact with foreign friends…to learn their ideas” (CT 17, Pair 4, Interview). Similarly, their Ontario partners also appreciated the opportunity of making connections with Shanghai teachers to form an INPLC.

“If I am talking about me as a teacher, part of what I find interesting about this experience is that I’m also developing relationships with other teachers, and learning about what they do…once I have an understanding, that will impact how I teach…” (ET 10, Pair 4, Interview)

The evidence also shows that some teacher participants became more open-minded because of the experience in the international school partnerships. Several Shanghai elementary school teachers compared their previous understanding with that after the experience. In Pair 4, one on-
site coordinator reflected that in the INPLCs teachers were “pushed” and “challenged” in a way that made them reflect on their own educational work (CT 18, Interview). Her colleague felt that she was “not so open-minded at the beginning” of the partnership and then became “more confident in communicating with them” after some time of conversation and collaboration (CT 15, Interview). In Pair 3, one teacher’s reflection represents her colleague participants’ feeling that they are urged to “go out of the boundary and strive to broaden the horizon” in order to improve themselves and hence benefit students.

“I am feeling I become more clear-minded because of the involvement in the project. I was confined with a small world before. I believe a person’s self-understanding is based on others’ recognition, feedback, and evaluation. Without comparison, we couldn’t see the real self.” (CT 10, Pair 3, Interview)

Their Canadian partner echoed that it is the time to “work with people in other schools in another part of the world and see what we can all do together and what we can learn from each other to improve or to change our perspectives or develop our understandings of teaching and learning in a global society” (ET 8, Pair 3, Interview). In addition, two Canadian secondary school teachers also demonstrated an increase of open-mindedness owing to the international experience. One computer science teacher found that the sister school partnership helped her “realize the importance and emergence of a global view” in education (ET 1, Pair 1, Interview) while one history teacher’s experience made her more sensitive and inclusive towards her students’ different cultural and educational backgrounds. She reflected in her interview:

“(I became)…being aware of in the global context who my students are and where they are from coming to my classroom…it has made me more curious and also made me a little bit more understanding when they come in (that) they are not used to be.” (ET 7, Pair 2, Interview)

Nonetheless, the impact on the cosmopolitan professional identity relies on the extent to which each individual teacher is truly engaged in the international professional learning opportunity. It seems that those participants who have a more proactive attitude towards the sister school work more likely had meaningful reflections triggered by the exchanges in these INPLCs; and hence their professional identities are more likely reshaped in terms of cosmopolitan awareness.
Equally true is that those who managed to take concrete actions in a way that impacted their teaching practice more likely reshaped their professional identity. Therefore, the impacts on professional identity are not evident with these participating secondary school teachers in both places since they have not been able to take too many real actions in addition to mostly exchanging information. Especially, these Shanghai secondary school teachers in Pair 2 seem to be trapped between those new ideas learned from western and world education and the restrictive reality that is not so favorable for innovation. Understandably, they, as well as the school administrators, would like to play safe without challenging “the current educational environment” although they complained about it. “Little influence” is the comment given by the Chinese on-site coordinator (CVP 1, Pair 2, Interview); and it seems true according to the teacher interviews.

Summary

Situated in the collaborative activities described in the previous Chapter 6, this chapter delineates in four aspects how Ontario and Shanghai teachers are influenced by their participation and experience in the reciprocal learning space. Their first contact with the other’s education brought them new information that might or might not be consistent with their previous knowledge or imaginations of the other. Consequently, teachers were enabled to reflect on and hence reshape their personal practical knowledge about their own teaching and the other’s education. Given the mutual learning about teacher knowledge, the evidence shows that teachers’ teaching and students’ learning in these participating schools are influenced to some extent owing to the collaborative nature of the sister school partnerships and some teachers’ proactive adoption and adaption of new practices. Teachers in both places demonstrated international awareness even before they entered the RL project; meanwhile, some teachers’ cosmopolitan professional identity was reshaped owing to their authentic engagement in these INPLCs. However, not all teachers were able to embrace this alternative professional learning opportunity that can enable them to gain knowledge, improve practice, and reshape professional identity in a way that benefits themselves and students. Teachers’ engagement in the INPLCs and consequent impacts rely on their current circumstances in relation to their prior knowledge about the other’s education, the existing school work, the negotiation between their local and global professional identity, as well as initial motivations of participation. On the other hand, the motivation to
participate can be maintained, lifted, or eroded depending on teachers’ perceptions of learning outcomes, benefits, and difficulties associated with these INPLCs. Moreover, teachers’ motivation can also be related to organizational conditions in their schools and in the school network that support or inhibit the development of these Canada-China INPLCs and associated teacher collaboration and learning. The next Chapter 8 will present findings about the organizational conditions for building and sustaining the teacher reciprocal learning space between Ontario and Shanghai schools.
Chapter 8
Organizational conditions for building and sustaining INPLCs

The previous Chapter 7 has verified that teachers’ current situation such as disposition to take part in cross-boundary professional learning, existing practice, and prior knowledge of each other’s education influences their engagement and learning as participation in the Canada-China INPLCs. Besides these teacher factors, organizational conditions for creating and sustaining these INPLCs constitute another part of the story that is worth an inquiry. In this chapter, I will firstly report findings about organizational conditions that support or inhibit the development and sustainability of the school partnerships and hence influence teachers’ professional learning in these INPLCs. These organizational conditions will be reported in two categories, namely within-school conditions and within-network conditions, following the theory of action about networked PLCs discussed in Chapter 4 (Earl et al., 2006). Appendix L shows the number of incidences where teachers and principals talked about each theme during their interviews. Secondly, I will try to explain how these organizational conditions, complicated by teacher factors, impacted teacher participants’ reciprocal learning experience. In addition, I will also compare similarities and differences of organizational conditions between Ontario and Shanghai participating schools. In some cases, the comparison between elementary and secondary schools is also taken into consideration if data do reveal disparities. This chapter mainly draws on both teacher and principal interview data. Also, I refer to Project Meeting minutes in which researchers meet participants of either side of the partnerships. During these Project Meetings, teachers and principals talked about organizational conditions for the sister school network as they did during interviews. Some Project Communication records between the researcher and participants are also referred to as needed.

Within-school organizational conditions

Principals’ support

All principals of the eight schools—four in Ontario and four in Shanghai—supported the establishment and development of sister school partnerships and associated teacher professional learning activities. Principals themselves expressed their consistent support in their interviews as
well as project meetings prior to or after the interviews; principals’ support is also verified by the information from teacher interviews on both sides. It seems that the positive attitude and support of principals constitute a crucial factor that influences teachers’ motivation and continuous participation. It must be true that most participating teachers identify with their principal’s view on the project and on education internationalization. This resonance attracted and motivated them to participate in the alternative professional learning opportunity in the first place. As teachers collaborated and learned as they engage in the partnerships, principals’ support and encouragement helped to maintain the motivation along the way. Several teachers in both places talked about this influence during the interviews. For instance, one Chinese participant articulated this point and his words could represent others’ feelings:

“They (school administrators) support boosted our motivation to participate. As individual teachers, we can’t do this by our own. The support at the school leadership level is crucial” (CT 5, Pair 2, Interview).

Although there are some variations in the way principals supported these INPLCs, in general three types of support are particularly valued by teacher participants in both countries: (1) the principal’s coordination; (2) the principal’s personal involvement in sister school activities; and (3) resources such as time, staff, and facilities allocated by the school.

In Pair 1, both Canadian and Chinese principals were personally involved in almost all sister school meetings and associated preparation work within each school. Only when two teachers in this pair decided to conduct a joint teacher study did the two principals start not to be involved in person. Actually, the Chinese teacher on the Shanghai side was recommended by his principal in order to sustain the partnership. In the Canadian school of the pair, one teacher reported that her principal was “very keen to have it happen” and that the principal spent time with the participating teachers to do some preparation work for the partnership (ET 2, Interview).

Similarly, in Pair 2, CT 3 of the Chinese school reported that “the school leadership strongly supports the project” (Interview) and CT 5 echoed that the support at the school administration level is “crucial”. The Chinese school even provided all equipment such as computers and video cameras needed for sister school meetings (Interviews). Monetary resource was also allocated by the principal to either pay participating teachers’ extra work entailed by the project (CVP 1,
Interview) or award teachers in the form of annual bonuses or overseas school visits (CP 2, Interview; CT 2, Interview). In the Canadian school of Pair 2, at the beginning of the partnership, the principal “hand-picked” candidate teacher participants according to her understanding of teachers’ professional development interests (EP 2, Interview). As the partnership goes, she is personally involved in most sister school meetings as she believes that the principal should be the one who “sustains it, maintains it” (EP 2, Interview). Her enthusiasm was confirmed by her teachers. For instance, ET 3 said: “…(she) is very excited and enthusiastic about it…she supports it. If we need time, she makes time. If it is a meeting, she will come to the meeting…” (Interview).

The principal’s coordination, personal involvement, and resources allocated by the principal are also evident in the two elementary school pairs. In Pair 3, the sole Canadian teacher participant also reported her principal’s support of the project to some extent. She felt “lucky” because the principal was supportive of what she wanted to do with the sister school partnership (ET 8, Interview). In the Chinese school of this Pair, the principal provided necessities for teachers’ participation and also personally participated in some sister school meetings (CT 10, Interview; CT 13, Interview); therefore, participating Chinese teachers felt the principal “is supportive and pays attention” to the project (CT 10, Interview). Actually, the principal always makes sure that the room and equipment for sister school meetings are prepared and an IT technician is on duty when these meetings take place (Interviews). Besides, the principal asked other school administrators to be involved in and support sister school activities in order to “broaden…horizons …for future development of the school” (CVP 3, Interview). Moreover, like the Chinese school in Pair 2, the elementary school also allocated a budget for bonus pay and extra pay for participating teachers (CP 3, Interview; CT 12, Interview). CVP 3 of the Chinese school verified:

“…we give teachers bonus when we evaluate them. It is…just a small stipend in the monthly evaluation. But it is a kind of recognition…We encourage teachers to participate in innovative and reformative actions. The Reciprocal Learning project belongs to this category.” (CVP 3, Pair 3, Interview)

The principal of the Chinese school in Pair 4 also got personally involved in sister school
meetings and activities according to the participating teachers (Interviews). At times, the principal needed to coordinate multiple departments of the school, including IT, logistics office, and the principal’s office, so that activities related to the sister school partnership could proceed successfully (Interviews). On the Ontario side, there are two Canadian participating teachers in Pair 4 and their reports are similar to other participants in the two countries. ET 9 thinks that his principal “is very supportive” and “trusts us to go ahead” with the sister school project (Interview); ET 10 echoed that the principal helped coordinate meetings and allocate the use of library and bulletin board for the purpose of sister school activities (Interview).

Although, in general all the Ontario and Shanghai principals demonstrated enthusiasm and provided support for the sister school network and associated teachers’ activities, the degree of support that these school administrators in the two places provided is somewhat different based on the available evidence. This difference is important because principals’ support not only influences teachers’ motivation but also facilitates teachers’ participation and learning and hence presumably impacts the learning outcomes. For example, as I will show in the next section, all of the four Chinese principals assigned or considered a staff member to be the on-site coordinator of the partnership whereas no Canadian principal suggested that. Another indicator might also reflect the different level of principals’ encouragement and support in the two places. The number of Ontario teacher participants is not comparable to that of Shanghai schools. 18 Shanghai teachers were involved whereas only 10 teachers participated in the Ontario sites. This disparity might be partially explained by the difference between the completely voluntary approach in these Ontario schools and the hierarchical and authoritative organization culture in the Shanghai schools (Wong, 2010); however, it might also relate to each principal’s will to promote the partnership and to encourage participation in the school. Moreover, based on the interview data, no evidence from the Shanghai sites shows teachers’ motivation and participation were negatively influenced by their principals whereas some evidence from the Canadian sites reveals that Canadian principals might take a somewhat “reserved” position as to supporting the sister school partnership. For instance, both ET 6 and ET 7 in the secondary school in Pair 2 don’t feel the school provided enough support for their participation. Another Canadian teacher in Pair 1 also reported that she felt her principal was “very reserved” in promoting the sister school partnership in the school so that “a lot of other teachers still don’t even know” of the
project (ET 1, Pair 1, Interview). Especially, the sole teacher participant in one Ontario elementary school felt very disappointed about the principal’s real support:

“I don’t think our administration has any goals and purposes themselves (for the partnership)...we call it a sister-school partnership but perhaps it should really be a sister-class partnership...He (the principal) wasn’t good at promoting the project in the school. He really didn’t...I myself promoted as much as I can but I think...the administrative climate has been extremely detrimental to the project.” (ET 8, Pair 3, Interview)

To explain the different degree of Shanghai and Ontario principals’ support, contrasting these school administrators’ view on the RL project and consequent actions is helpful. It seems that Ontario and Shanghai principals’ views on the goal and potential mutual benefits of the Canada-China sister school partnerships differ. It is certainly true that all involved Canadian and Chinese principals expressed their enthusiasm about the project during project meetings and their interviews. Indeed, principals’ initial enthusiasm is the most important reason why their schools participated in the first place. However, while these Canadian principals particularly emphasize the cross-cultural learning opportunities for students their Chinese counterparts incline to think of this type of international collaboration as an opportunity for the overall school development. Specifically, all the four Canadian principals are concerned about the multicultural reality in the school, in the community, or in the city; and this concern became the foremost motive for them to bring their schools into the RL project. EP 1 was concerned that those non-Asian students in the school are “sort of sheltered” in their predominantly Caucasian community although they live in a culturally diverse city; EP 2 reported that her school is “very multicultural” with more than 30% student population being Chinese; EP 3 explained that the proximity of the school with the China Town of the city is an important reason for which the school was involved in the project; and EP 4 stated that the community that her school location is “so predominantly Chinese”.

“...clearly it’s a good idea...our community is so predominantly Chinese... So, to get to know the community, to get to understand the culture, although we are very Canadianized, even for many of our Chinese-speaking students, I think it is important to see, to have an opportunity to have a China experience.” (EP 4, Pair 4, Interview)
For Chinese principals, they have a higher and larger expectation for the international school partnerships. They looked forward to not only student benefit but also the benefit for teachers and even for the school. When CP 2 talked about the collaboration on AP math between the two secondary schools, she envisioned that the participating teacher (CT 4) could become a “seed” who would imitate, master, and hence spread the learned methods among colleagues. The vice principal of the same school elaborated the school leaders’ view of the project linking to the current development of the school.

“...our school is in the process of reforming teaching and learning. The student-centered approach is fundamentally consistent with the way of teaching in western classrooms. Therefore, we would like to see how it is carried out in one western country...we can learn from them in terms of content, approaches and strategies of teaching in order to improve our teaching and education.” (CVP 1, Pair 2, Interview)

CP 3 sees the partnership as a “rainbow bridge” between her school and the outside world, and she believes this connection can increase the “confidence of operating the school” because it “facilitates us to communicate regularly and continuously about some topics and thoughts” (CP 3, Interview). Therefore, she required other administrators in the school to participate in sister school activities as well alongside teachers in order for professional learning to be enhanced (CVP 3, Interview). Referring to the major school based curriculum and research International Understanding Education (IUE) in the school, CP 4 stated:

“I think our school needs this kind of sister school relationships. It is because of the background of our school development… We intend to explore paths towards students’ IUE… We think that the sister school project opened a window for us. Although we are doing IUE, we mainly did it within the school with the door being close. We had little knowledge about the current culture of foreign societies and particularly foreign school culture… It (the project) is highly related to the IUE and our school based research.” (CP 4, Pair 4, Interview)

One key of the RL project is to encourage and facilitate reciprocal learning that means connecting practitioners in the two countries in a way that teachers collaborate and learn from each other by being involved in ongoing practice. According to the principals’ interview data, it
seems that Shanghai school administrators identify with this fundamental goal of the RL project more readily than their Ontario counterparts do. While Shanghai principals consistently expressed their appreciation of this kind of “deep exchanges”, Canadian principals provide little evidence showing that they truly identify with the goal of reciprocal learning.

“The main reason why I am particularly interested in the sister school project is that it seems to provide opportunity for teachers and students from the two sides to do something together. In the process of doing one project together, they may learn from each in terms of their ways of thinking, values, and codes of behaviour. I believe this kind of collaboration and sharing is deep exchange.” (CP 2, Pair 2, Interview)

As I have shown in Chapter 3, Ontario and Shanghai have very different focuses in terms of internationalization in school education. It seems that these Shanghai participating schools have been involved in more international exchange activities than their Canadian sister schools have. All the Chinese principals, as well as some of the Chinese teachers, mentioned their schools’ continuous efforts in terms of educational internationalization such as short-term study overseas, school visits in foreign countries, and other sister school partnerships besides the Canadian relationship. Against this policy backdrop, Chinese principals probably see it is indispensable and urgent for their schools to build more international relationships and doing more concrete exchange activities with schools from other countries, particularly with those from developed western countries. Consequently, the Shanghai principals in the study were disposed to encourage and push in some way their teachers to take part in international professional learning activities. For these Ontario principals, however, they might not sense this kind of urgency and indispensability although they do see the value of the Canada-China sister school network as to students learning and development in the globalized world.

“…it’s pilot, it’s not a life and death…so I don’t think there’s anything dangling over head to scare someone not to do it. It’s just a really exciting opportunity, something different that’s come our way, let’s be the pioneers and try it out, and let’s have fun along the way doing this… that’s basically how I feel about it, I share that…over to the staff, and to the students, and of course the communities.” (EP 4, Pair 4, Interview)
It is Ontario and Shanghai principals’ different views on the goal of the international school partnerships and education internationalization that contributed to their different actions. Apparently, Chinese principals and schools invested more in the sister school partnerships than their Canadian counterparts did. Chinese principals were not only personally involved but also allocated financial and human resources in the school to facilitate teachers’ participation, learning, as well as the partnership development. By comparison, Canadian principals took “reserved actions” when they dealt with the sister school partnership in the reality of their schools and the education system. For instance, one elementary teacher reported that her principal hardly promoted the project within the school and for most of the last two years she was “out there…alone”; and despite the principal’s occasional support, she still felt a sort of indifference of the principal: “…but it was always just me going and saying this is what I want to do…”(ET 8, Pair 3, Interview). EP 2 lamented that she was “tied by more policies and protocols” than her Chinese counterpart (Interview), referring to the difficulties in allocating resources in her school in a way that benefits the sister school partnership. Understandably, she showed her hesitation to continue the partnership when she faced internal difficulties (Project Communication, April 4, 2015; October 28, 2015) and finally called for a pause when a work-to-rule teacher strike hit the school (Sister School meeting, November 30, 2015). Similarly, EP 1 admitted candidly that the sister school partnership should not be a priority at certain times of a school year: “Now we cannot worry about this (sister school partnership)…when the things go smooth then you can start dreaming, oh, it would be nice to have this or have that” (EP 1, Pair 1, Interview).

**On-site coordinators in Shanghai schools**

Associated with Chinese principals’ strong support, each of these Shanghai schools assigned or considered to assign a person within the school to coordinate the sister school partnership without a suggestion in this regard from the RL project. This institutionalization move benefited the development of the partnerships and teacher learning; therefore, it deserves a separate discussion. In Pair 2, one vice principal (CVP 1) of the Chinese school was designated by the principal at the very beginning of the partnership to coordinate sister school activities in the school and communicate as a liaison with the researcher. According to CVP 1’s own report, she is the administrator who is in charge of foreign exchanges for the school and teacher training.
Another vice principal (CVP 2) was also involved when CVP 1 was not available sometimes. Similarly, the principal of the Chinese elementary schools in Pair 3 also designated an on-site project coordinator in the school who is a curriculum leader. The curriculum leader reported her coordination work as to the sister school project in her interview:

“…the Principal designated this (sister school) task to me…Before each videoconference, we would get together to discuss and plan…I am also in charge of promoting and reporting the project outside the school, summarizing participants’ experiences such as small stories (of participants).” (CT 14, Pair 3, Interview)

In Pair 4, there are two on-site coordinators designated by the principal with each taking a slightly different responsibility. One of the two coordinators (CT 15) is also a curriculum leader in the school like the one in Pair 2, while the other coordinator (CT 18) is a middle level school administrator in charge of student extra-curricular activities at the school level. They reported their complementary roles as to the sister school partnership in their interviews:

“I mainly take a coordinator role. I organized students to attend videoconferences and I coordinate follow up activities in the school. In other words, I make sure the activities are carried out well. Certainly, I am personally involved throughout as well.” (CT 15, Interview)

“My role…is to share student activities of the school (with the sister school), like processes and outcomes of activities during the school year... Also, in the campus, I tried to promote the project so that students of the school all know about it. Moreover, I introduced this project to guests visiting our school and kindergarten kids.” (CT 18, Interview)

Indeed, these on-site coordinators in all the three Shanghai schools streamlined the communication between the RL project and the schools and facilitated teachers’ participation and professional learning. One exception is the Chinese secondary school in Pair 1. It was not until the beginning of the third project year that the principal started to “identify an administrator in the Dean’s office” to lead a new initiative in a hope of sustaining the collaboration between the two schools (Project Meeting, September 17, 2015). Unfortunately, this initiative was not
implemented and this partnership also ended before long. In the other three Shanghai schools, teacher participants appreciated the support and coordination of the school that were delivered by these on-site coordinators. Moreover, owing to the on-site coordination, there seem to be emerging within-school teacher communities around the sister school project. For instance, CVP 1 created a social media group for all the participants in her school including RAs. Also, she called on meetings to discuss the progress and issues of the partnership. The teacher participants in both Chinese elementary schools reported that they felt they were “working in a team”. When the researcher and other RAs visited the two Chinese elementary schools, team meetings for the sister school project were convened by the on-site coordinators (Project Meeting, May 14, 2015; Project Meeting, May 29, 2015). However, so far there is no available evidence that can show the correlation between the on-site coordination and the outcomes of teachers’ participation such as teachers’ learning attainment and practice change. Hopefully, as the collaborations in each school pair go broader and deeper, the evidence of this institutionalization design’s effect can emerge.

On the Canadian side, however, no school identified or considered assigning an on-site coordinator. Instead, RAs of the RL project took almost full responsibilities for coordinating sister school meetings and project meeting in these Ontario sister schools while principals sometimes stepped in as needed. While these on-site coordinators in Shanghai schools would ensure everything was ready in their schools before sister school meetings or activities, RAs on the Canadian side had to arrange these events involving participating teachers and bring equipment such as laptop, speakers, and microphones to schools to facilitate meetings. As such, the degree of support and the resources allocated in these Ontario schools for the development and sustainability of the sister school partnerships contrast with these Shanghai schools. Shanghai schools intend to make the sister school partnership a school business whereas Ontario schools almost leave it to some individual teachers’ effort. Without an on-site coordinator and other concrete support, the development and sustainability of the school partnerships, as well as the process and outcomes of teacher learning in the INPLCs, as one Canadian principal candidly put it, would almost completely rely on teachers’ personal interest and “good will” (EP 2, Pair 2, Interview).
Local educational authority’s involvement

Related to the support within the school, local educational authority’s involvement is another organizational factor that influenced the development of the sister school network and hence teachers’ international professional learning. The ways of local educational authorities’ involvement in the Canada-China sister school network differ intrinsically in the two places. Therefore, this factor impacted on participating schools, principals, and teachers in the two places very differently. In Shanghai, the two elementary school sites were recommended by East China Normal University (ECNU), which is one partner university in the RL project. According to one of the ECNU professors who is working on the project, the Education Bureau (EB) where the two elementary schools are located is only “aware of this project but…not involved.” (Personal Communication, June 15, 2015). The two Shanghai secondary schools were directly contacted by the main research team of the RL project which is based in the University of Toronto and the University of Windsor. No EB staff of the two respective districts were involved in the initial partnership building process. However, although the schools are not required to report international exchanges as they happen, they do need to report these activities to the EB “either in the work plan at the beginning of each semester or in the work report at the end of each semester”; and if personal exchanges are to happen, the schools should report the EB and the Foreign Affair Office of the district in advance (CVP 1, Personal Communication, June 15, 2015). In the interviews, both principals of the two secondary also confirmed that they only needed to report the sister school partnerships to the EBs at some point but not necessarily before they started. As such, it seems that Shanghai school principals have the discretion to establish and develop international connections for their schools. On the other hand, understandably, these Shanghai schools would not necessarily expect concrete support from the EBs; based on the researcher’s observation and the information from the interviews, it is certainly true.

The circumstance of the local educational authority’s involvement on the Ontario side is quite different. Firstly, the School Board (SB) in which all the Canadian participating schools are located is one partner institution of the RL project by agreement. The project and the SB have signed a Memorandum of Understanding to formalize the partnership. Secondly, all the four participating schools were approved by the SB at the beginning and the SB has been informed of all the ongoing sister school activities and the status quo of the sister school network
development. The information of the formal partnership between the RL project and the SB was passed to the schools and teachers through these involved principals. In the interviews, teachers also mentioned they were aware that “there must be something in place…otherwise we couldn’t do this (ET 9, Pair 4, Interview)”.

Under this circumstance, it is reasonable for participating principals and teachers in the Ontario schools to look forward to some kind of concrete support from the SB. However, it seems that their expectation has not been satisfied. I asked every Canadian teacher participant about how much support they think they had received from the SB. Surprisingly, half of them (n=10) reported “No”, four of them said “I don’t know”, while one teacher implied “little” support. Consequently, it seems that teachers’ motivation to participate and learn was negatively impacted by the lack of tangible SB support that teachers expected to receive. For instance, one secondary school teacher, who left the project at the beginning of the third year, stated strongly:

“The board provided absolutely nothing, no support, no guidance, no structure at all...In going forward, if the board is serious about this type of thing, they have to provide support in terms of release time and in terms of structure.” (ET 6, Pair 2, Interview)

Two of the four Ontario principals verified the concern over the lack of expected financial support and coordination from the SB. The other two Canadian principals sounded to be more forgiving over the issue of the SB support. One of them (EP 3) thinks that the district leaders’ support in principle is sufficient for him to operate; the other (EP 4) shares this sentiment, and therefore she has not expected too much input from the SB given the particularity of the international sister school partnerships (Interviews). The RL project is still ongoing and the partnership between the SB and the project is still valid. Hopefully, the SB would provide some substantive support in the future according to participating teachers and principals’ needs. As of today, however, the circumstance of the SB support on the Canadian side is not in favor of the development of the sister school network, taking into account the different situations on this matter in Ontario and Shanghai sites.

“…the concern I think with most of us is that we don’t get direct support from the board…We don’t have anybody (in the board) could say:….what do you need to continue?...So up to us.” (EP 1, Pair 1, Interview)
“Sometimes I would like the teachers who participate in the sister school project to all sit down together. It would be great, but it is not gonna happen…Only the board can provide the financial support…(now) we are all like working in our little hole not knowing about the others.” (EP 2, Pair 2, Interview)

Student and parent support

Support from students and parents are evident in all the four schools in the two elementary sister school pairs. However, little evidence is found in the two secondary school pairs probably due to less student involvement there. All Shanghai participating teachers in Pair 3 reported active responses and strong support from students and parents. One Ban Zhu Ren surveyed the students in her class and the parents at a parent meeting. She reported that all parents “are very supportive” and they even would offer dinner if kids and teachers had to stay after school for late sister school activities (CT 12, Interview). Similar reports came from CT 10 and CT 11 in the same school; and the on-site coordinator (CT 14) and the principal (CP 3) also confirmed parents and students’ excitement and strong support for the sister school partnership. In the Chinese school of Pair 4, parents and students’ support is strong too. CT 16 promoted the sister school project at a parents’ meeting, and she found parents were “very excited”. As the partnership goes, parents “put extra energy to help” their kids to participate in events related to the sister school partnership (Interview). The principal (CP 4) and one of the on-site coordinators (CT 18) gladly found that the billboard that shows Canadian students’ exchanged art works was voted by students as one of the ten Most Attractive School Scenes, which is a school wide event to promote campus life (Interviews).

In the two Canadian elementary schools, it seems that the level of parental involvement and support is not as high as that of the Chinese schools, although limited evidence does show that the support from parents is available or emerging. The principal in Pair 3 saw some parents gradually getting “on board” after they observed benefits for their kids (EP 3, Interview). The principal in Pair 4 shared sister school activities with parents regularly through newsletters and parent council meetings and she found that “there is a support…people are excited about it” (EP 4, Interview). Students’ support for their teachers’ involved in the Canada-China sister school partnership is evident. ET 8 in Pair 3 worked with her students on designing sister school related
curriculum so as to make sure her students “buy into it”; and in this way she apparently managed to require a lot of students’ time and energy in order to organize and teach these innovative curricular units related to the sister school collaboration. In Pair 4, one of the two teachers clearly saw that “(T)here is an interest for sure” because “the kids are keen…I don’t think it has anything to do with building that excitement...it’s already there” (ET 10, Interview).

**Limited time**

Quite a few Chinese participants talked about the concern over the limited time they were able to invest in the sister school partnership and thus capitalize on it. They sensed that limited time commitment would “impact the collaboration” negatively because “we easily forget about them (sister school activities) …we have many other things to do at school” (CT 17, Pair 4, Interview).

“To achieve that goal (of partnership) requires time and energy… For classroom teachers like us, we have limited time and energy, although we have interest. Also, students’ limited time doesn’t allow us to experiment.” (CT 5, Pair 2, Interview)

As I discussed in Chapter 7, many Shanghai teachers participated in the RL project because of their principals’ initial push. This initial motivation to participate seems to complicate teachers’ sense of time commitment since they likely regarded the task as an additional to their existing teaching responsibility. Actually, in the interviews, quite a few Chinese teachers reported that they felt this partnership work is an extra to their existing intensive time table and heavy work load. A more favorable understanding was “another step to think and do things” (CT 10, Pair 3, Interview) whereas a worse case would be “it is an extra” no matter what (CT 16, Pair 4, Interview). Due to pressing domestic responsibilities such as teaching a “graduating class” or “other projects”, participating Shanghai teachers felt that the time that can be committed to implementing ideas and plans of the sister school partnership is inexorably limited. In fact, both elementary and secondary school principals in these Shanghai sites sympathize with their teachers’ concern about time and understand the difficulty.

“Chinese teachers’ work load is already very heavy…(they) are really very busy. Although we only have some exchange activities sporadically, they still feel heavy burden of tasks…(For instance), we could not get all teachers of a class together (for the
sister school meetings) because when one teacher comes out for the meeting another should be in the classroom (with students).” (CP 3, Pair 3, Interview)

“Our teachers are very busy in teaching and our students are loaded with their own learning tasks. If the project is not task oriented, they would easily put it aside.” (CP 2, Pair 2, Interview)

Relatively fewer Canadian teachers raised the issue of limited time commitment. Actually, only two Canadian secondary school teachers in Pair 2 complained that they needed “release time” for their participation in the sister school partnership because they basically regarded it as “an extracurricular thing” (ET 7, Interview). Especially, one department head found that “time investment was one big difficulty” and hence suggested: “If you are trying to do something like this…release time would be something that potentially helps”. He added that Ontario teachers’ professional development (PD) time has been reduced in recent years and as a result it is impossible to fit the additional sister school matters into that already limited PD time (ET 6, Pair 2, Interview). As for the two teachers in another Ontario secondary sister schools, they did not raise the time issue since the teacher collaboration in this pair had not demanded much time investment of them yet. The three participating Ontario elementary teachers do not seem to be concerned about time commitment too much either. The main reason can be related to the fact that these teachers combined the sister school activities with the regular curriculum teaching. However, it is not to say they did not need to invest in some extra time for the collaboration in these INPLCs. For instance, ET 10 in Pair 4 reported that in order to scaffold her students’ writing and sharing their movie commentaries with Shanghai students she had to make extra effort and “talk a lot about it with interest to see what come up within our conversations”; and hence she prefers incorporating sister school activities into her daily work schedule so that it will not be an “add-on” (Interview). Similarly, ET 8 in Pair 3 reflected that over the past two years “there was a lot of new work, (but) a new experience” owing to the sister school partnership (Interview).
Sustainable commitment

Besides limited time, sustainability is another issue that needs to be carefully considered. It is noteworthy that each of these teacher participants is having full time teaching and other responsibilities in the school regardless of strong motivation, persistent interest, and other people’s support. That the work related to the sister school partnerships is essentially outside the framework of the existing domestic school work makes sustainability become an issue of concern. Thankfully, some teacher participants relentlessly stay in these INPLCs and continue meaningful cross-cultural educational activities that benefit their students and themselves owing to their passion for cross-boundary professional learning and enthusiasm for students’ international education experience. They overcame inconveniences and obstacles in terms of time, distance, or resources that are unavoidably associated with this kind of international professional learning activities. Notably, a few teachers in each school pair consistently expressed their interest and continuously participate in ongoing sister school activities. It is their commitment and persistence that have secured the sustainability of the Canada-China sister school network and hence continue to mutually benefit teachers, students, and schools in the two countries.

The sole Canadian teacher participant (ET 8) in Pair 3 continues to collaborate with a team of teachers in the Shanghai sister school. Also, another teacher in the Canadian school was attracted into the project and started collaborating with another teacher in the sister school from the beginning of the third project year. The Chinese side of Pair 3, including teachers and school administrators, has been consistently committed to the partnership. In Pair 4, the partnership was successfully resumed after an interruption due to a work-to-rule teacher strike in Ontario elementary schools that lasted a few months. The two Canadian participants are still enthusiastic about the project and associated collaborative activities between the two schools. For example, ET 10 advised that she would sustain the collaboration by “build(ing) it into our schedule with each other” (Interview). Likewise, the team in the Chinese sister school warmly welcomed the reconnected relationship and the resumed collaborative activities (Sister School Meeting, January 14, 2016). The secondary sister school partnership of Pair 2 is still on hold due to a similar work-to-rule teacher strike in Ontario secondary schools; however, both principals expressed their willingness to resume the teacher collaboration once the strike is over (Project
Meeting, November 30, 2015). The only school that left the RL project is the Shanghai school in Pair 1; its departure can be attributed to participants’ decreased interest and the need to find a better match for the Canadian sister school from the RL project’s point of view. Subsequently, the Shanghai school was replaced by one Beijing middle school.

Although the Canada-China sister school network manages to be sustained owing to many teachers and researchers’ commitment and effort, some sustainability issues that could jeopardize the development and expansion of the network emerged. First, several teachers on both sides stopped participating due to their diminished motivation or other reasons such as leaving a participating school. As I have shown in the previous Chapter 7, teachers’ motivation to participate would be decreased when they perceived too many obstacles, unsatisfying learning process and outcomes, and emerging sustainability issues. In turn, these negative observations and perceptions of participants would harm the international school network and these associated teacher INPLCs. Actually, none of the teachers who demonstrated negative motivation change, as shown in Appendix K, continued to participate in the third project year. Another problem that causes inconsistency in sister school collaboration is changing staff. ET 3 in Pair 2 left the school in the middle of a school year and stopped participating in the sister school partnership at the same time; consequently, her Shanghai partner teacher (CT 2) never got the feedback on the student survey on which they had collaborated. Coincidentally, CT 2 left his school at the beginning of the third project year too although he was still enthusiastic about the project according to his interview. In addition, CT 8 and CT 9 both left the same Shanghai secondary school at the end of the second project year. These teachers’ departures, regardless of reasons, automatically ended the collaborations in which they had been involved.

Second, some Shanghai participants complained about several Canadian teachers’ lack of follow-ups. For example, one teacher in Pair 3 expressed her frustration in her interview while another teacher in Pair 2 talked about his similar experience.

“I used to write a letter…asking her about student assessment…She didn’t reply that letter at all…later she stopped participating in the project. I felt so regretful.” (CT 12, Pair 3, Interview)
“I took it (student survey) very seriously and my students were very interested too. They came to ask me why there won’t follow-up information. I had to say it was because the sister school didn’t give feedback. I feel it was very regretful.” (CT 2, Pair 2, Interview)

As the Shanghai principals actively supported their teachers to participate in the sister school partnerships, they sensed the sustainability issue that was mainly caused by the Canadian side. One secondary school principal observed that “the sister school is changing all the time…seem to have some difficulties; therefore, she suggested limiting the number of collaborations between the two schools so as to “to see regular sharing and reporting” (CP 2, Pair 2, Interview)”. Her Canadian counterpart then agreed to only keep two collaborations for the partnership in the future (Project Meeting, September 2, 2015). CP 4 in Pair 4 also stated that it is “no good if the exchange goes, like, on and off” and that the partnership “should ensure frequency of communications” (Interview). Similarly, CP 3 articulated her view of a consistent and sustainable school partnership:

“I feel that our current (sister school) collaboration relies on improvisation. Ideas were randomly created at meetings and then we go on to discuss about them…an overall plan about what to do, what to be expected, and what are follow-ups is preferred (CP 3, Pair 3, Interview).”

The Canadian side provides the other side of the story. One Ontario principal duly pointed out that Canadian principals have to deal with many policies and regulations related to students and teachers that might delay or sometime prevent international exchange activities (EP 2, Pair 2, Interview). The researcher’s observation in these schools confirms her report. Canadian principals need to handle things like the unions of teachers and staff and the regulations of students’ privacy and safety, which their Chinese counterparts have never heard of before. For instance, two video clips of Canadian teachers’ teaching could not be transferred to Shanghai because the parents of several students in the classes did not sign their media release forms. Also, when teachers were on work-to-rule strike, Canadian principals had to either leave the partnerships to teachers’ own discretion or temporarily put them on hold in order to avoid complications. It seems that the completely voluntary approach is related not only to the democratic culture in these Ontario schools but also these regulations and laws that Canadian
principals have to follow. Thus, a Canadian principal would have less authority than their Shanghai counterparts to intervene if a certain collaboration is threatened due to the departure of a Canadian teacher or a teacher participant’s lack of prompt follow-ups. It is this gap that caused the aforementioned Shanghai teachers and their principals’ complaints about the consistency and sustainability of the Canada-China sister school partnerships. Teachers’ “good will doesn’t happen all the time” (EP 2, Pair, Interview); it causes harm when it is not available.

Within-network organizational conditions

Pre-existing conditions

Several pre-existing organizational conditions contributed to the initial building process of the Canada-China sister school network. First of all, the RL project is a SSHRC partnership grant that requires partners to provide a “cash and/or in-kind contribution” in order to reflect “the meaningful collaboration and involvement of partners” (http://www.sshrc-crsh.gc.ca/funding-financement/policies-politiques/cash_inkind-especes_en_nature-eng.aspx). Because of this partnership arrangement, no project fund is directly offered to these participating schools in either country. It is expected that these schools alongside the partnered school board and/or universities could offer financial or non-financial support for building the school network and facilitating educators’ collaborative activities. Second, the methodology and design of the RL project ensure schools and educators would have free choices on collaboration topics in each school partnership and each teacher INPLC. As I mentioned earlier, the project gives sister schools discretion to negotiate and decide their common interests of collaboration. The project then assists teachers to implement their collaboration plans by providing needed information, communication, and translation. As such, on the one hand teachers and principals have autonomy and ownership over these sister school activities and professional communities; on the other hand, the school partnerships and the sister school network are expected to become self-sustaining, given educators’ growing knowledge and skills of partnership activities.

Third, most participating schools except the two Shanghai secondary schools had some kind of connection with one previous sister school project (2009-2012) directed by the same two professors, on which the current RL project was built. Actually all the four Canadian
participating schools had connection with the previous project to different extents. EP 1 was contacted by the previous project although she and her school were not directly involved in the former project; EP 2 personally participated in the previous project in the capacity of a Vice Principal of the school where she previously worked and visited China as the leader of the school delegation. In Pair 3, the Ontario elementary school just reconnected with its former Shanghai partner school with which it had partnered in the previous project. Several teachers in the Ontario schools, including ET 8, were involved in the previous project although the principal (EP 3) was new. In addition, the two directors have been doing research work in the Ontario elementary school for many years even prior to the previous sister school project. On the Shanghai side of Pair 3, CP 3 and one teacher (CT 12) participated in the previous project and hence visited the Canadian school a few years ago. Pair 4 is also a reconnected partnership. One teacher (ET 9) in the Canadian school in this pair participated in the previous project and visited the Shanghai sister school. Actually, it is this teacher’s enthusiasm that prompted the incumbent principal of his school to support the current sister school project.

In summary, these organizational conditions prior to the current Canada-China sister school network formed the ground on which these INPLCs were to be created. Meanwhile, these pre-existing conditions, depending on how they work, may or may not contribute to the development of the school network in a positive way. On the one hand, schools and educators’ former connections with the preceding sister school project and with the two directors of the current RL project were definitely helpful at the time when the network was initiated. Also, educators’ ownership of the sister school collaboration can appeal to many participants to join in and stay on board. On the other hand, the ownership and autonomy could be complicated by many local pressures on teachers in a way that would result in inconsistency and unsustainability of partnerships and associated professional learning. I have discussed this matter earlier in this chapter. Moreover, the anticipated financial or non-financial contribution from partner institutions and schools might not be materialized at all; and therefore the lack of concrete support from the teachers’ perspective might impact their motivation and outcomes of participation and learning. Actually, some participants did raise the concern over financial support, institutional support, or related issues such as teachers’ release time that jeopardized teachers’ participation (Interviews).
Negotiating for a long term goal for school partnership

The sister school network was created in the environment of the RL project. The goal of the large project is to build cross-cultural knowledge and facilitate mutual understanding in order to benefit both sides educationally and socially. To this end, educators who are involved in these INPLCs in the school network are expected to share and build knowledge including personal practical knowledge in the process of cross-cultural, cross-system collaboration (Connelly & Xu, 2015). According to the interviews, many of the teachers and principals identify with the goal of the Canada-China sister school network. I have shown that the Shanghai participating principals seem to accept the fundamental idea of reciprocal learning more readily than these Ontario principals. For teachers on both sides, most of them also embrace and practice the opportunity of mutual learning through collaboration. Almost all the sister school activities were designed by teachers to be collaborative work involving both parties. Particularly, some Shanghai educators reflected that this reciprocal learning experience characterized by international collaboration is more meaningful for them than their past professional learning in this regard, such as “reading journals” or listening to foreigner teachers’ speeches or “learning from media” or “using foreign textbooks” (Interviews). Indeed, it is upon the identification with the fundamental goal of reciprocal learning that these educators started negotiating the goal for each partnership. However, the understanding of the overarching goal of the RL project and the sister school network does not practically guide participants as to how to go about the international professional learning opportunity in the local reality. Each sister school partnership and teacher community needs its own goal, focus, and plan to operate; and each has its own particularities with which the goal is to be negotiated by educators themselves linking to their current work. Given obvious cultural and systemic divergences between the two sides and inherent difficulties of international collaboration, negotiating a goal or a common plan for a partnership is definitely not easy.

In Pair 1, with the departure of the Shanghai secondary school at the beginning of the third project year, the principal’s dream “to see more in-depth exchanges (of students and teachers) or in-depth curriculum exchanges” was not and will not be realized after a long period of discussion, planning, and trial between the two schools. In Pair 2, it was not until the beginning of the third
In the project year that the two schools figured out that only mathematics and a student environmental activity could be the two focal areas for future sharing and collaboration.

“…now we have a little bit more focused. We identified a few areas for collaboration (in math). We exchanged materials and we went back and forth…we want to see where they lead us…right now I am possibly more interested because we want to get somewhere with this collaboration.” (ET 5, Pair 2, Interview)

Pair 3 had spent much time on “talking and not with any focus or goals” before they finally landed on something concrete to collaborate on in the second project year. At the beginning of the third year, owing to two partner teachers’ commitment and persistence science education has become one focal area for their long term collaboration whereas a new pair of teachers are still negotiating for their common interest.

“Our goal last year was to establish that connection of sharing water culture with the sister school…Now what we do when we are moving forward for that water culture, that’s where we are now in my mind.” (ET 8, Pair 2, Interview)

In Pair 4, the exchange of student art works and an inter-school student ambassador club gradually came to be the feasible areas of common interest between the two groups of teachers after a few successful exchanges in the second project year. In addition, several new ideas also emerged during a most recent meeting (Sister School Meeting, January 14, 2016); however, it is too early to tell if they would work at all.

The process of negotiation for a common interest and plan was certainly full of difficulties. In some cases, these difficulties urged participants to seek solutions; however, some might just give up. Obviously, the departure of several teacher participants on both sides is related to these obstacles and the sense of lacking a clear goal.

“I think one of the big difficulties is…accessing the resources necessary to set up a lasting partnership…to set up something that works.” (ET 7, Pair 3, Interview)
“…we could not find a focal point that both sides are interested…we didn’t focus on something... Therefore, I felt that the project is not so helpful for me.” (CT 12, Pair 3, Interview)

Meanwhile, some participants offered insights on how to set up a clear goal or plan of a partnership in a way that can “stimulate motivation and help to overcome obstacles” and enhance the effect of these INPLCs. Several teachers believe that the RL project needs to give more guidance in terms of the goal for partnerships. One teacher in Pair 2 did not seem to get what the project was supposed to do and hence he insisted that defined expectations for the project “must be clearly articulated” to participants (ET 6, Interview). One Chinese teacher in Pair 3 suggested that he needs “some good suggestions” from the researchers in order to make the collaboration better (CT 13, Interview). His colleague, the onsite coordinator, was concerned by the lack of a guiding plan at the end of the second year and thought the project might need to provide a “systematic top-level design” because “participants don’t have sufficient time and theoretical thinking”. (CT 14, Pair 3, Interview). Several other teachers also offered suggestions in order for a common partnership vision, such as “do more planning in advance” or “a set timeline” before everything began or “everybody needs to be together in order for an agenda” (Interviews).

The difficulty of reaching a common goal or plan was observed by the Shanghai principals too. At the end of second project year, three of the four Chinese principals raised the issue in their interviews while the other (CP 1) apparently lost his way since the collaboration in Pair 1 had fallen by the way side. These principals pointed out that the lack of a goal for the partnership could affect efficiency and erode teachers’ motivation. At the same time, to solve the problem they suggested having “an annual plan”, “a holistic framework”, “focused topics of exchange”, or a “top-level design”.

“We should have a defined task and plan. Otherwise, motivation would be fading out… we should make a plan, say an annual plan, and determine periodical goals. I think this kind of planning shouldn’t lag behind.” (CP 2, Pair 2, Interview)

“I believe the sister school collaboration can be more systematic and more sustainable. We shouldn’t do like sharing water education today, doing Lantern Festival the next day, and coming up another thing at another time. This is scattered way of thinking, lacking a
holistic framework. This way helps less in terms of the development of the school as a whole.” (CVP 3, Pair 3, Interview)

“…we hope that the two schools can agree on several relatively focused topics of exchange. Without these focus topics, I feel that our sharing is too casual and ineffective. I would like to see that everyone has prepared in advance of the meeting and at the meeting we share about these pre-determined topics. Our discussion can go deeper.” (CP 4, Pair 4, Interview)

Contrasting with Shanghai principals’ demand for an overall plan for each school partnership, Canadian principals barely talked about the issue from a school administrator’s perspective. It is probably because these Ontario principals still regard the sister school partnership as their teachers’ individual effort rather than a collective effort of the school. Hopefully, with the consistent commitment and efforts of these teachers who continue participating, their common interests and plans can lead to a broader sense of shared purpose of the school partnerships involving more teachers and the school administrators on both sides. Arguably, having a common vision and shared plan can definitely make these school partnerships and teacher INPLCs more efficient, more consistent, and more sustainable.

**Handling culture and system differences**

Obvious differences exist between Shanghai, China and Ontario, Canada in terms of culture and education system. Although in history and at the contemporary time Shanghai people have a lot of experiences with other cultures especially the western culture, the majority of Shanghai’s population still belong to Han ethnicity and they are inheritors of a Confucian legacy. It is well known that Chinese society and organizations are more hierarchical and authoritarian comparing to their western counterparts. Moreover, China now is a communist society that further emphasizes collectivism, social order, and the power of the state. Shanghai society and schools should more or less reflect these same characteristics. Ontario, culturally and linguistically diverse as it is, might not qualify as a stereotypical European-derived western culture any longer; however, it belongs to a democratic nation in the western world that typically values equity, individual freedom, and human rights, all of which originated in traditional western
philosophical thought. Regarding education, the two places probably not only contrast about societal values, views of knowledge, ways of human learning and development (Hayhoe, 2008) but also differ in terms of the structure of the system, emphasis of the curriculum, and orientation of recent educational policies, as I have briefly reviewed in Chapter 3. Despite these disparities, Ontario and Shanghai, including these participating schools and educators, are facing the same more and more interconnected world. When they do have opportunities to meet, talk, and collaborate, they have to handle these differences in order for reciprocal learning to take place.

Based on the available information, some features of the two education systems and cultures did create obstacles for the development and sustainability of the Canada-Chinese sister school network and these associated teacher INPLCs. First, elementary and secondary schools in the two places contain different grades. In Shanghai, elementary schools begin with Grade 1 and go up to Grade 5. Grade 6 to Grade 9 students go to different junior high schools; then secondary schools start with Grade 10 and end with Grade 12. In Ontario, there are two types of elementary schools with one type only having Grade 1 up to Grade 6 and the other including Grade 1 to Grade 8. Some intermediate schools in Ontario only have Grade 7 and Grade 8 while secondary schools usually begin with Grade 9 and go up to Grade 12. Moreover, teachers in Shanghai schools usually follow their students to move to upper grades teaching them for a few years, whereas Ontario teachers either stay in one grade in the elementary school case or teach certain courses that are open to certain grades. That is to say, while a certain Shanghai teacher could participate in the project together with his/her same students, one Ontario teacher might have to change his/her students every year.

Unsurprisingly, both of the two elementary sister school pairs encountered difficulties when teachers in the two places collaborated involving their students. For instance, one teacher reported that her Grade 1 and 2 classes had to partner with a combined Grade 3-4 class in the sister school because the participating Canadian teacher only teaches this grade. She thinks that this awkward arrangement impacted sister school activities because “apparently, they have different points of interest” (CT 10, Pair 3, Interview). Fortunately, the later collaboration in Pair 3 between Grade 4-5 teacher ET 8 and CT 13 worked automatically because the Chinese teacher’s Inquiry Curriculum (IC) course opens to Grade 4 students as well. In Pair 4, one teacher who was teaching Grade 5 when she started participating alongside her students said:
“…the schools chose the higher grade to participate. This choice made their relationship unsustainable. Kids only have one last year in the school. It could start from earlier so that kids form longer relationship, like 3 years or even 5 years.” (CT 16, Pair 4, Interview)

Her wish to sustain a longer collaboration lasting “3 years or even 5 years” would not happen because her two Canadian partners only teach Grade 5-6 combined classes although the sister school runs from Grade 1 to 8. To overcome this systemic divergence, ET 9 and ET 10 in Pair 4 creatively suggested a solution. That was a student club including students from any grades led by these current participating teachers in each school. The Chinese side immediately accepted this great idea; and hence this pair started activities in the form of student club from the beginning of the third project year.

“I like what we have talked about earlier…opening it up to not just ET 9’s classroom and my classroom, but to the junior division for example, having class reps…so that the children in grade 4 can be following this program and building relationships for the next three or four years.” (ET 10, Pair 4, Interview)

Second, contrasting curricular features and pedagogies in the two school systems also create difficulties for deep collaboration. Teachers in the two places immediately found out that the ways of delivering curriculum in Shanghai and Ontario are markedly different. Besides other pedagogical differences, Shanghai teachers who are subject specialists found it was hard to really engage in deep collaboration with Ontario teachers who are usually generalists. For example, in Pair 3, CT 11 was shocked because she saw “the Tangram collaboration was suddenly stopped” and her partner teacher just started teaching a completely different subject. Two other teachers who used to share their math teaching also talked about their collaboration experience.

“ET 8 is an all-subject teacher whereas I am a math specialist teacher. I would like to dig into math topics as deep as possible. But I felt that she might be limited in terms of math. Besides math, she is interested in other areas such as poems and science. There areas of interest cannot be connected to mine…” (CT 10, Pair 3, Interview)

“I think sometimes Canadian teachers are maybe more anxious about doing a subject partnership because they are generalists, you will have an intimidation factor such as the
subject like math for lots of teachers like that when they compare student achievement…” (ET 8, Pair 3, Interview)

In secondary schools, inevitably, different examination systems in the two places made Canadian teachers feel “hard to compare” while Chinese teachers and principals found they had to creatively link sister school collaborations with EC or IC courses that do not necessarily target Gao Kao. One Canadian math teacher pondered when he talked about pedagogical differences between the two systems:

“…hard to compare because they have the competitive exam system. We do not have that…We are working according curriculum standard…” (ET 4, Pair 2, Interview)

Even though Shanghai teachers in Pair 2 strived to make collaborations happen in their EC courses, such as a TI calculator course and an AP math course, the looming pressure of Gao Kao and Hui Kao on both teachers and students doomed these efforts to be unsustainable. CVP 2 reported candidly in her interview:

“Up to Grade 11, those so called Extended Courses are actually oriented towards examinations. Courses are designed in a way that teaches how to take exams, for example, _Getting-an-A-Class for Hui Kao_. It is usual in a public high school like us. In addition, few grade 11 students would like to select an EC class that teaches AP… AP is not for their examination.” (CVP 2, Pair 2, Interview)

These difficulties resulted from divergent curricular features and pedagogies in the two systems obviously affected some teachers’ motivation to continue their participation. Those teachers who discontinued by the end of the second project year saw these differences as unsurmountable obstacles for future collaboration. For example, in Pair 2, one history teacher expressed this opinion in her interview and her Canadian partner echoed:

“We wanted to share our classroom teaching. Unfortunately, we were not able to implement it because we realized that the differences between our classes are too large to borrow from each other…Maybe it is especially the case for our humanity subjects like history.” (CT 9, Interview)
“We looked at our curricula. Our curricula didn’t line up perfectly. So, things that they are covering I do not cover in our curriculum…So, it made a kind of challenge to figure out our area of focus.” (ET 7, Interview)

The similar feeling was expressed by the Shanghai elementary teachers too whereas Ontario elementary teachers seemed to be able to navigate through these divergences thanks to the autonomy of curriculum implementation. For instance, one Ban Zhu Ren felt that her partnering with a Canadian teacher was like “using donkey lips to match horse mouths”, quoting a Chinese idiom (CT 10, Pair 3, Interview), while another teacher just thought she could hardly learn “any concrete knowledge or skills from them” because the two systems are “too different after all” (CT 17, Pair 4, Interview). Indeed, as far as these Shanghai schools are concerned, “it is hard to get deep to the school curriculum and the core of the school work” (CVP 3, Pair 3, Interview). In addition to these obstacles related to curriculum and pedagogy, according to the interviews, schools and participants also had to deal with other systemic disparities that can impact the development of sister school partnerships and teachers’ collaborations, including problems such as incompatible teaching goals due to different student bodies, incongruent teachers’ responsibility profiles, mismatching school schedules such as exam times, as well as different holidays.

Third, regarding cultural differences, participating teachers on either side did not seem to encounter many conflicts owing to RAs’ mediation. The RAs who helped communication and collaboration between the Canadian and Chinese teachers are bilingual in English and Chinese and to some extent culturally knowledgeable of both societies. Nonetheless, two cultural differences are still noteworthy in order for future better reciprocal learning between teachers in the two countries. One, educators in the two places deal with students’ rights differently. For example, it is a normal practice in Ontario schools to ask students and/or parents to sign Student Media Release Forms before students’ pictures are taken to share with people outside the school. This practice is not only required by the school board but also by the approved ethical protocol of the RL project. This consent becomes even more important since in the RL project students’ images might be shared with people in another country. However, this normal practice seems abnormal in many Chinese teachers’ eyes because there is nothing equivalent to it in Shanghai schools, and probably in schools in mainland China. Moreover, neither school districts nor
universities in China have an Ethical Review Board or the like. Given these differences, some Shanghai teachers apparently encountered problems when they wanted to exchange student works or pictures with the sister schools. For instance, one Shanghai teacher found it was hard to get what she asked from her Canadian partner with regard to student work. She believes that the way in which Canadian schools deals with student privacy makes the sister school relationship harder (CT 10, Pair 3, Interview). Interestingly, her principal questioned this practice from a cultural perspective:

“I sense that (it) lacks something…we Chinese people appreciate kinship and trust. Our parents have developed a kind of love of the school, therefore, they completely trust our teachers and put their kids on the teachers’ hands...I feel that the relationship between the school and families is not only built on a legal foundation. Parents and the school have deep kinship.” (CP 3, Pair 3, Interview)

Another case in point occurs in Pair 2. The Chinese school in Pair 2 provided a few video clips of classroom teaching that show teachers’ teaching and students’ images. These Chinese teachers who taught these recorded classes would like to see classroom teaching of respective subjects in the Canadian sister school. However, after three classes were videotaped, only one video clip was successfully transferred to the Chinese school because some students in the other two classes had not signed the Media Release Form. “The media release requirement kind of foiled our plan for it to be truly fruitful”, ET 7 expressed her regret in her interview. CVP 2 the onsite coordinator of the Chinese school complained:

“We have many open classes that can be shared and viewed on internet. I hope our sister school can provide more this kind of open classes so that we can see their regular class teaching and learning.” (CVP 2, Pair 2, Interview)

For another activity between the two schools, CVP 2 suggested letting students of the environmental group in each school contact directly through group emailing. Nonetheless, this idea, which seems quite easy to apply from the Chinese VP’s point of view, was blocked by the Canadian principal because she was concerned with students’ internet safety (Project Communication, April 8, 2015). Fortunately, as these school partnerships evolve the two Canadian elementary schools resolved the issue around media consent by the end of the second
project year owing to both Canadian teachers and principals’ effort. They gained the consent from the majority of student participants of these involved classes so that teachers now can feel free to share student work as well as student photos when necessary. For the Shanghai educators, they definitely learned a lesson.

The second evident cultural difference is related to the use of communication and social media tools. The cyberspace in mainland China is a relatively enclosed environment and this isolated space created different culture and habits of using communication tools in China than those in Canada and probably the rest of the world. I will discuss this issue in detail in the next section, which is dedicated to communication concerns. In addition to the two aforementioned cultural differences, there are still several misunderstandings related to culture that might impact communication and mutual learning of the sides although the impact of these misunderstandings seem minimal so far based on available information. For instance, one Canadian principal mentioned in his interview that Chinese teachers were too “guarded” to share their authentic experiences and practices (EP 3). One Canadian teacher seems to share the similar feeling about his Chinese partner’s openness; she comments that her teacher partner seems to “too cautious” (ET 1). Another Shanghai teacher’s observation on the different performances of Canadian and Chinese teachers during videoconferences might provide a footnote for the two Canadian participants’ feeling.

“They asked most questions whereas we Chinese teachers don’t take the initiative to ask. We Chinese teachers tend to answer their questions and offer what they asked.” (CT 11, Pair 3, Interview).

From my researcher’s perspective, however, I think these negative feelings related to cultural differences are more like misinterpretations or misunderstandings than participants’ objective observations. The relationship between the two parties is still rudimentary and they have not understood each other to a substantial degree without further deep conversation and collaboration. I do believe that the more each side learns about the other the more these misunderstandings can be reduced.

It is worthwhile to point out that, as the foregoing discussion reveals, more important is not how large these cultural and system differences are; rather, it is how participants in these INPLCs
handle these differences that results differently. For some participants, these cultural and systemic divergences posed obstacles for collaboration and hence reciprocal learning; however, these same differences can be precisely opportunities of learning from other teachers’ point of view. Consequently, the different perspectives about difference impact educators’ motivation and engagement in this kind of cross-boundary professional learning experience. Those who saw these differences as unsurmountable obstacles for reciprocal learning either left the project due to decreased motivation or dealt with these issues passively. Unlike the two Canadian elementary schools that sought to clear students’ media consent so that deep exchange can proceed, the teachers and the principal of the Canadian school in Pair 2 avoided dealing with the hassle. Consequently, two video clips could not be exchanged and the two teachers whose classes were recorded left the project by the end of the project too. Hopefully, as sister school partnerships deepen and teachers in the two places get more familiar with each other, there will be more creative solutions to these cultural and systematic disparities, such as the creation of student clubs by ET 9 and ET 10 with their Chinese partners in Pair 4, in a way that enhances school partnership and teacher collaboration. In one speech at the 2nd Annual conference of the RL project, one participating Shanghai principal (CP 3) stated that the gap between the two schools and two systems is precisely the learning opportunity. Another Chinese secondary school principal resonated with this: “If the two schools are too similar, then the value of exchange is limited. The more differences we have, the more meaningful our exchange is” (CP 2, Pair 2, Interview).

Difficulties in communication

In international professional communities like these ones in the Canada-China sister school network, difficulties in communication are inevitable due to many factors such as language barrier, geographic distance, and different cultures. In the interviews, the most cited difficulties that participants encountered included the time difference between the two places, the language barrier, and the two relatively separated social media and internet worlds. One, Ontario and Shanghai are on the opposite sides of the globe and hence there is a 13-hour time difference in normal time and 12-hour time difference in summer time between the two places. The difference is “literally day and night difference” as one Canadian principal (EP 2) complained in her interview. Therefore, all the sister school meetings had to be arranged either in early mornings or
in the evenings outside the normal school schedule. Therefore, participating teachers and principals had to either come to school earlier or stay late on campus particularly for these videoconferences. Moreover, some ideas such as real time class observation just could not be implemented due to the time difference. Participants complained about this kind of hassle in the interviews; but they know they have to live with it.

“The first difficulty is time difference. It makes hard to arrange things. Some ideas are great, but they are hard to be implemented because of the time issue.” (CT 9, Pair 2, Interview)

“Another is the time issue. Actually, our Chinese teachers are the busiest in mornings because they have to go to classrooms…teachers had to run between the meeting and classrooms. So, 8:00am for us is difficult. If the time was in the evenings, it was not convenient either. Teachers are very tired.” (CP 3, Pair 3, Interview)

“In order for us to meet in small groups via Skype…either group should come after school hours or before school hours to have the face-to-face experience. That limits us. Yet, I don’t think it stops us, it’s just an exciting challenge that we just have to overcome.” (EP 4, Pair 4, Interview)

Two, language difference causes another unavoidable difficulty in communication and collaboration between teachers in the two countries. Although the majority of these Shanghai participants had learned English before, their proficiency in this language is not enough for this kind of professional communication with Canadian teachers. Some younger Shanghai teachers are able to read English emails; but several senior teachers neither speak nor read English, therefore they just “knew I received an email and that was all” (CT 16, Pair 4, Interview). For Canadian participants, neither researchers nor Chinese counterparts have anticipated their being able to understand Chinese anyway. Among all the Ontario participants, only one teacher and one principal can speak Mandarin. During sister school meetings, the language barrier did not seem to block the way of teachers’ conversation owing to the Chinese-English bilingual RAs’ interpretation. RAs also helped translate exchanged teaching materials and samples of student work so that educators on the two sides can better understand each other’s teaching and learning. In some cases, Chinese teachers also sought language support from English teachers in their
schools while Canadian teachers found their Chinese speaking students are helpful. However, despite these language supports, teachers still experienced inconvenience and difficulties in their collaboration. Actually, teachers from both sides were keen to directly interact with each other; unfortunately, the language barrier made them “never really that deeply join” the conversation during meetings. For instance, one math teacher in Pair 2 believes that he could “learn more about them” and his understanding would be deeper if he was able to communicate with sister school teachers directly (CT 3, Interview). Moreover, several participants expressed their concerns over the accuracy of understanding and efficiency of communication due to the interpretation that “will still be needed”. One Shanghai teacher and one Ontario teacher in the same school pair talked about these concerns.

“It is hard to express ourselves fully and communication is not efficient (due to interpretation). Like, we had prepared many things to talk (during the meetings), but we end up only talking about one or two. I found that every time we couldn’t finish what we wanted to say. I don’t know how to improve.” (CT 17, Pair 4, Interview)

“…but there is still a translation issue, so you are not necessarily getting right to the middle of things”. (ET 10, Pair 4, Interview)

Three, as I mentioned in the previous section, mainland China has a relatively isolated cyber world due to governmental censorship. The different internet environment in the two places created divergent habits and culture of communication in the two societies that caused some obstacles to efficient and smooth communication. In mainland China, it is not easy to open some overseas websites; and even if they were accessible, the browsing speed would be very slow. Many popular western communication and social media tools, including Facebook, Twitter, Instagram, products of Google, are all blocked in mainland China. Instead, most popular social media platforms in mainland China are domestic products such as QQ, Wechat, Feixin, and Weibo, which altogether provide similar functionalities as their western counterparts. Especially, QQ and Wechat have a great number of users in China. With these convenient instant messaging tools, Chinese teachers and principals do not seem to have a habit of checking emails regularly. Also, none of these Chinese participants has an institutional email box for work related communication. From my personal experience, using Wechat, sending text messages by phone,
and calling by phone in urgent situations are efficient ways to contact these Chinese participants. They do not seem to mind if I contact them by their personal cellphone numbers or personal email addresses. On the Canadian side, however, emailing is still the primary communication tool between researchers and participants. Canadian participants have a habit of checking their institutional email boxes regularly. In addition, I have never contacted Canadian participants by their personal phone numbers and personal email addresses.

These differences of communication habits and culture in the two places not only caused some difficulties for researchers to distribute information to the two groups of participants but also created blockages as to the communication among teachers themselves. It is almost like Canadian and Chinese participants are dwelling in two different cyber worlds between which RAs of the RL project have to be the messengers. At many times, researchers had to double-post messages through emails with Canadian participants but through WeChat or other channels with Chinese participants. The process of communication was certainly slowed down. CT 1 in Pair 1, who is the IT department head of the school, told me that he “rarely writes emails” and checks his email box at most once a week (Interview). His Canadian partner ET 1, who reportedly checks email frequently, complained about the pace of communication with him:

“I would like to hear from him whenever I send the message. That’s the basic (thing) otherwise it kills the interests that are ongoing.” (ET 1, Pair 1, Interview)

To overcome these communication blockages, there are emerging creative solutions thanks to the cooperation of both Canadian and Chinese participants. For example, the RAs working with the teachers in Pair 3 created a QQ group involving teachers and researchers in both countries. The QQ has a built-in translation functionality that helps teachers in the two ends understand each other while RAs also help clarify when difficulties occur. In Pair 2, the on-site coordinator (CVP 1) created a WeChat group including all Chinese participants in the school as well as the researcher to streamline project communication. It was hoped to include Canadian teachers in the sister school into the WeChat group; however, that plan did not work out because they preferred to use it on computers for which there is no proper version of WeChat because this platform was primarily designed for smartphones.
Related to these communication efficiency issues, clearly there is a need for a common platform that could streamline ongoing exchanges and communications among these participants. Actually, in their interviews teachers and principals in both places expressed their wish to have a common digital platform in order to enhance communication and collaboration. Indeed, it is better to have a common communication platform, like a website, for both sides so as to avoid the hassle of using multiple communication tools. A common “share point” can hopefully facilitate discussion, record exchanges, and hence enhance communication and collaboration. Unfortunately, this seemingly easy requirement had not yet been accomplished as the project headed into its third year due to various reasons that are beyond the scope of the study. Actually, there is a project website; however, it is designed for research purposes but not for participants’ communication needs. Since the beginning of the project, efforts were made to create a common communication platform; however, none of them had worked. The most recent platform was created at the University of Windsor in Canada. Chinese participants reported that “it is very slow” or that they just could not open it “at home and at school” because of Chinese government’s internet censorship. To date, most communications and exchanges still have to rely on RAs as the third party using multiple tools. As I reported earlier, teachers from both sides would like to have direct ways of sharing and learning and asynchronous direct communication is obviously one of them. Due to the time difference and the anticipated ongoing exchanges, a common platform that may enhance reciprocal learning is desperately needed. As the following two interview excerpts show, many participants on both sides expressed the demand to increase efficiency and effectiveness of sharing and communication.

“It is good to have those face-to-face meetings, of course, like those you have facilitated. But for additional information and those documents going back and forth, it would be great if we could comment directly.” (ET 5, Pair 2, Interview)

“Currently, information is still delivered through research assistants. Direct communication between us teachers is necessary. Skype meetings can’t last long, also we had internet connection issues, interpretation also takes up time; so, we couldn’t talk too much over Skype.” (CT 15, Pair 4, Interview)
Needing in-person exchanges

During the previous sister school project (2009-2012), only a few of the current 39 participants of this study had visited the other country or the respective sister school. Only one Canadian teacher (ET 9) had visited his sister school while one Canadian principals (EP 2) visited China but not the current sister school. Only one Chinese teacher (CT 12) and one Chinese principal (CP 3) from one same Chinese school had visited their sister school in Ontario. Two Canadian principals (EP 1 and EP 3) had visited China a few years ago but not in the context of the sister school project, while another Canadian teacher (ET 3) had gone to China once for tourism purposes. In the current RL project, none of these current 39 participants have yet visited each other by the end of the second project year. When I interviewed the participants at the end of the second year or at the beginning of the third year, no visits or arrangement of visits had occurred. It has been shown that initial face-to-face contact is crucial for the development of teachers’ learning communities in the hope of increasing engagement and effect of professional learning (Wideman, et al, 2007). Due to the absence of face-to-face communication, there is certainly a need for in-person visits in order for better collaborations and exchanges in these teacher INPLCs in the Canada-China sister school network.

Many participants expressed their hope to visit the sister school in person in their interviews. Under the current circumstance, they could listen to or read about or watch by video what each other does in the classroom; however, they could not “see it in action” or “talk to kids there” or show things that “need to show” in person or see the “big organism” of the school (Interviews). They believe that in-person observations and exchanging ideas can enhance the collaboration between schools and teachers because face-to-face communication “creates more momentum” and may push teachers’ effort to “a higher level”. Moreover, they believe that real time observation and conversation can provide teachers more information so that they can have deeper and fuller understanding in a way that enhance mutual learning. In short, with in-person communication the impact of the school partnership on teachers and on the school can be increased.
“We would like to go there and have a look in person. Teaching video is different. Like, when we have open classes, students and teachers behave differently. So, we would like to have a look at their classes in real time.” (CT 6, Pair 2, Interview)

“…it is one thing to talk about how we do things, but it’s a whole other thing to actually see it in progress. For me, I feel like I would learn a lot more, not just by having conversations with teachers, but through observing them and being a part of, what’s going on there in their day”. (ET 10, Pair 4, Interview)

A few participants particularly point out that there should been some sort of initial in person communication at the beginning of the partnership. They think that having face-to-face contact at the early stage of negotiation can create an initial bond and a sense of trust that benefits future collaboration and communication. Several Chinese teachers and principals especially feel the desire for this kind of initial in-person meeting. CT 18 in Pair 4 said that she just “needs to meet the partner in person” because “without in-person meeting…it is hard to say we are real friends” (Project meeting, May 29, 2015). Her principal (CP 4) resonates with her feeling while another Chinese principal (CP 3) explains the importance of initial face-to-face contact nicely by invoking her understanding of “kinship” in the Chinese culture. Speaking of her persistent commitment to the partnership with the same Canadian school, she states:

“I think the most important reason is that principals and teachers of the two schools used to visit each other in person. We developed a quite good feeling for each other. The emotional factor is the first most reason as we Chinese people attach much importance to kinship…We felt common language that the two schools share… I feel that we are close although the two schools locate in two countries…” (CP 3, Pair 3, Interview)

In-person visit can be regarded as an incentive for teachers’ participation too. For example, one Canadian teacher candidly reported that the main motivation for her participation is “the trip”. In the interviews, two Canadian principals implied that a free trip to China can be an incentive for teachers to participate. Interestingly, the two Chinese secondary schools seemed to build the incentive of a free trip into the process of soliciting teachers to participate. In his interview, CT 1 in Pair 1 mentioned that his principal linked his participation to the prospective student exchange program that would be led by one teacher. The school administration of the other Chinese
secondary school seemed to make this point clear on the outset. CT 2 mentioned the incentive and his vice principal who is the on-site coordinator confirmed in their separate interviews.

“The school promises that if the partnership goes on well, we will have opportunities to go abroad to visit the sister school.” (CT 2, Interview)

“I hope our principal will make arrangement and send some teachers to visit the sister school. For teachers, visiting abroad is the most tangible incentive for the participation in the project.” (CVP 2, Interview)

The project attempted to send Canadian participants to visit their Shanghai sister schools in May 2015 when the second Annual General Meeting was held in Shanghai. Unfortunately, this attempt did not get through due to an unsuccessful negotiation between the project and the involved Canadian school board. These Canadian participants, including principals and teachers, expressed their disappointment during interviews or project meetings. As I began to write this thesis, the RL project was making an effort to financially support a few Canadian participants to visit Shanghai sister schools during the third project year while considering inviting Chinese participants to visit Ontario schools in the following project year. As a result, two Canadian teachers in one Ontario school visited their sister school and partner teachers in the second half of the third project year. Hopefully, in-person exchange can become a built-in practice in these school partnerships and teacher communities.

**Importance of facilitators**

RAs have been supporting most of the participating schools in the two countries. The four Ontario participating schools were fully supported by a RA team supervised by one of the two project directors who is affiliated with the University of Toronto. Two RAs including the researcher have been working on the project since the project began in 2013 and stayed for longest time comparing to other RAs or volunteers who usually left the project after a period of time. We two RAs have been taking the main responsibility of coordinating meetings and sister school activities in the four Ontario schools. At the same time, we collaborate with a RA team supervised by a professor in the East China Normal University (ECNU) on the work regarding the two elementary school pairs. The ECNU RA team provided on-site support in the two
Chinese elementary schools. However, there has been no on-site RA support in the two Chinese secondary schools. The researcher, as well as other short-term research assistants, supported the sister school activities in the two Chinese secondary schools remotely. As I have mentioned earlier in this Chapter, the levels of needed RA support in Ontario and Shanghai participating schools are different because the schools in the two places offered different levels of internal support. Especially, three Shanghai schools have onsite project coordinators. In all the research sites, teachers and principals acknowledged the contribution and importance of RAs’ facilitation and mediation in a way that enhances partnerships and professional learning. The following are several sample testimonies from two school pairs about how teachers and principals feel grateful for RAs’ support and how they think RAs’ work sustains the partnerships and enhances reciprocal learning.

“Another very important thing is that our sister school project has research assistants…to be facilitators. This made our work relatively easier. The bridge that you (RAs) created is fantastic!” (CVP 2, Pair 2, Interview)

“You (RAs) are the necessary support, like through the Skype conversation, we have translation, and we have connection set up and everything like that with the other school.” (ET 7, Pair 2, Interview)

“I think the ECNU RAs are doing a great job. Each time when we had exchange, the RAs all participated. They interpreted, recorded the process, and then sent us documents. That’s why we felt that the difficulty due to language barrier was largely reduced. And that’s why the work can sustain until today.” (CVP 3, Pair 3, Interview)

“(She) was excellent. She was an outside resource that can keep it moving with her time and being able to write things, monitor things…” (EP 3, Pair 3, Interview)

The RL project started with building Canada-China sister school network followed by research; therefore, RAs were actually involved in the developmental effort of building school partnerships in addition to formal research activities such as data collection. Based on both participants’ report and the researcher’s personal experience, three aspects of RAs’ facilitation enhanced the collaboration and communication between Ontario and Shanghai educators in
INPLCs. One, RAs coordinated sister school meetings and sister school activities. During these meetings and activities, RAs facilitated, observed, and took field notes to document the content and process and share these notes with participating school on the other side, especially when these events only happened in one school of a school pair. Two, Chinese-English bilingual RAs interpreted during sister school meetings and translated exchanges materials and samples of student work. Actually, teachers on both sides have to rely on the interpretation and translation due to the language barrier. Three, RAs are messengers who transmitted information back and forth. Very often, RAs would find themselves helping the two parties negotiate goals and plans of sister school activities while translating and transmitting messages. In some special events, RAs also helped to deliver in person exchange materials between Ontario and Shanghai schools. Material and gift exchanges occurred in all the four school pairs; and all these items were delivered by RAs when they had chances to visit. As such, RAs’ facilitation, coordination, and mediation sustain the sister school partnership, keep these sister school activities moving, and enhanced the reciprocal learning in these teacher INPLCs. Teacher participants certainly appreciated RAs’ support for their international professional learning effort; and hence the metaphors of “bridges” or “match makers” or the like were mentioned many times in the interviews. One teacher said it nicely:

“…you (RAs) made a bridge for us. Our school and the Canadian sister school are like two islands in a vast ocean. The bridge you created enables us to communicate and share. Your work seems to me like match making (laughing).” (CT 2, Pair 2, Interview).

Summary

This chapter reports organization conditions, including within-school and within-network conditions, that contributed to or in some cases restrained the development of the Canada-China sister school network and associated teacher INPLCs. Indeed, the building and sustainability of the reciprocal learning space between the two countries and education systems certainly require a lot of organizational efforts from both sides. The data show that six organizational conditions within the school or system are crucial to teachers’ engagement in the learning space, including the principal’s support, on-site coordination, tangible support of the local education authority, students and parents’ support, sufficient time investment, and sustainable commitment. Some
variations between Shanghai and Ontario schools with regard to these within-school organizational conditions are also identified. Within the network, there are still six important organizational conditions affecting the sustainability and effect of INPLCs, including pre-existing conditions such as historical school connections and designing features of the network, ways of handling culture and system differences, ways of dealing with communication difficulties, negotiation for partnership goals and focus, importance of in-person exchanges, and researchers’ facilitation and mediation. The analysis points out that while these within-school and within-network conditions affect the building, development, sustainability of these sister school partnerships and teacher communities, they also impact individual teachers’ participation and learning experience particularly on their motivation and commitment. It is not clear, however, how these organizational conditions could impact teachers’ professional learning outcomes such as knowledge attainment or practice change. Also, only limited evidence shows some within-school organizational conditions such as the onsite coordination for the international professional learning opportunities might help link the learning to the practice of within-school PLCs. In addition, it is needed to point out that these organizational conditions were identified when the Canada-China sister school network still operated at the early developmental stage with few networking activities across sister school pairs being introduced. The next chapter will discuss the findings that have been reported in Chapter 6, 7, and 8 in the light of the literature and hence conclude the study.
Chapter 9
Discussion, Conclusion, and Implications

A summary of main research findings

Nowadays, teachers have many chances to be exposed to the education in other countries thanks to easily accessible information and convenient international travel. Because of personal interests, some teachers might learn about aspects of others’ education through the media or internet or other resources such as foreign guests. However, these stories about other education systems are usually not reliable and probably biased too; and more importantly, teachers might not link the overheard information to their teaching and student learning in the classroom. This kind of information is just some anecdotes about foreign education; it is not knowledge for teachers as far as teacher learning is concerned since it probably has no real influence on them. It is also a matter of fact that most ordinary teachers in a country do not have the opportunity of exchanging ideas, not to mention directly collaborating, with other teachers in other countries. At the same time, however, the discourse and policies pertinent to education internationalization can readily make teachers curious to learn how teachers and students in other education systems are actually doing in the school and classroom. Besides, perhaps a few widely known international comparisons of education, such as PISA, also have made teachers even keener to peek into others’ daily educational practices.

In this study, I find that the majority of the participating Canadian and Chinese teachers reported regretfully that they had never had a chance to learn about the education of the other country. That is to say, the RL project is the very first time for most of the teachers to ‘see’ schools, teachers, students, and the education in general on the other side of the globe. In addition to mere hearing stories about how each other is doing, these teachers also take advantage of the facilitation offered by the RL project to collaborate with each other on some work of common interest. According to the social learning theories and the tenet of professional learning communities (PLCs), teachers’ mutual learning that can lead to real change may occur given the observations and interactions between teachers in the communities. Another related fundamental belief about teacher learning is that the improvement of teacher learning can bring about improvement in student learning. In other words, in theory in the Canada-China sister school
network these Ontario and Shanghai teachers’ learning through their participation in the internationally networked PLCs (INPLCs) may affect their students’ learning.

It is based upon these basic assumptions that this study seeks to understand the teacher learning in INPLCs in the unique sister school network between Canada and China. Overall, this study answers the following questions: what are the processes, content, and effects of teacher learning in emerging international professional communities between Chinese and Canadian schools and what organizational conditions can support and sustain teachers’ international professional learning? To this end, this study tackled four subsidiary research questions. Research question one asks what activities happened and what teacher knowledge has been shared and created in the nascent INPLCs between Ontario and Shanghai schools. To answer this question, I identified collaborative activities that teachers in the two places initiated, negotiated, and engaged in. Also, I examined the knowledge that was shared and learned through teachers’ participation in these cross-cultural collaborations. Research question two asks how teachers are impacted by the participation in the INPLCs. To answer this question, I probed into four aspects, including the motivation to participate, teacher knowledge, teaching practice, and professional identity. Research questions three and four ask what organizational conditions support the early development of the INPLCs between Ontario and Shanghai schools and how these organizational conditions sustain school partnerships. To answer the two questions, I investigated both within-school and within-network conditions that can be conducive to the development and sustainability of school partnerships, and hence supportive of teachers’ mutual learning. In addition, this study conducted comparative analysis about Canadian and Chinese teachers’ experiences in and views on the emerging international professional communities between the two countries.

This study firstly provides the descriptions of the collaborative activities taking place in each sister school pair in the Canada-China sister school network. Each sister school partnership is treated as one unit of the international school network. The data shows that teachers mainly engaged in two forms of collaborative activities—thematic activities on which the two sides worked collaboratively; and videoconferences during which the two sides exchanged ideas and negotiated plans. These collaborative activities and other corresponding communications and material exchanges constitute the reciprocal learning space in which teachers in the two places
collaborate and learn from each other. Aggregated interview data shows that the teacher participants mutually benefited from the cross-cultural knowledge exchange and collaboration although they also encountered some setbacks associated with these collaborative activities. This study validates the conclusion that Ontario and Shanghai teachers are impacted in four aspects, including knowledge, practice, professional identity, and motivation to participation by their learning experiences in the sister school network. Importantly, this study shows that these impacts on teachers can only be understood alongside the accounts of teachers’ current circumstances regarding the prior knowledge about the other’s education, the ongoing teaching practice, the weight of global awareness in teacher identity, and the initial motivation to participate.

The data reveals that, in addition to teachers’ willingness to participate, the creation, development, and sustainability of the reciprocal learning space between Ontario and Shanghai schools demands a lot of organizational efforts from both places and from external facilitators. This study identifies two layers of organizational conditions, within-school and within-network conditions, that are conducive to the development and sustainability of international school networks and hence supportive of teachers’ cross-cultural, cross-system professional learning. This study has discovered six important within-school organizational conditions in the international school network, including the principal’s support, on-site coordination, tangible support of the local education authority, students and parents’ support, sufficient time investment, and sustainable commitment. This study also shows there are still six important within-network organizational conditions affecting the sustainability and outcomes of the INPLCs in the network, including pre-existing conditions such as historical school connections and design features of the network, ways of handling culture and system differences, ways of dealing with communication difficulties, negotiation for partnership goals and focus, importance of in-person exchanges, and researchers’ facilitation and mediation. In addition, this study finds that while these within-school and within-network conditions affect the building, development and sustainability of these sister school partnerships and teacher communities, they also directly influence individual teachers’ participation and learning experiences particularly in terms of their motivation and commitment.
Comparative findings—focusing on differences

This study also provides comparative findings based on Ontario and Shanghai teachers’ reported reactions and experiences. The reciprocal learning space not only facilitates the participants’ cross-cultural collaboration and mutual learning but also enables the researcher to compare participants as they collaborate. The comparative findings to be summarized in this section only focus on differences between the two groups of participants because commonalities have been reflected in the foregoing summary of main findings. The data suggests that Shanghai teachers perceived more knowledge attainment, particularly in the area of pedagogy, than Ontario teachers did through the international collaboration. On the other hand, Ontario teachers seemed to be more confident to demonstrate constructivist pedagogies to Shanghai teachers that they are using in the classroom whereas Shanghai teachers did not seem to think they can offer much in terms of their ways of teaching and learning. This difference may be related to the two groups of educators’ different dispositions to learn from elsewhere when they do have a chance to collaborate with international educators. Ontario teachers presumed that Chinese education is more “traditional” than Canadian education, therefore they were inclined to show Shanghai teachers some new ways of teaching and learning whereas most Shanghai teachers seemed to assume a learning position in the first place. Perhaps the Canadian teachers in this study perceive a kind of “heightened status”, which is also identified in some international schools, associated with their “pedagogical competence granted by their more advanced culture” as opposed to the non-western culture and pedagogies (Tarc, 2009, p. 128). For Shanghai teachers, clearly, they have much more prior knowledge about the education in the west than what Ontario teachers know about Chinese education. As a result, Shanghai teachers were more disposed to learn from the western education or foreign education to which they believe Canadian education belongs, and they were willing to incorporate what they think useful from foreign education in order for the improvement of their local practices. This finding regarding Shanghai teachers’ strong disposition to learn from foreign education echoes some scholars’ observation that Shanghai educators tend to adopt and adapt imported ideas and pedagogies open-mindedly and judiciously (Tan, 2013; Tsui & Wong, 2009).
The data reveals that Ontario teachers are more motivated to participate by the expectation of student benefit than by their own professional learning whereas Shanghai teachers are more likely to be motivated by the expectation of professional learning than by student benefit. This difference is true at least at the initial stage of the collaboration between the two groups. Also, in comparison with Ontario teachers, Shanghai teachers seem to be more influenced by their colleagues and especially by their principals’ opinion and authority than Ontario teachers are. This difference probably can be explained by the different organizational culture in the two societies. For instance, while Wong’s (2010) study found that authoritarian-oriented practices and collectivist values are evident in Shanghai schools, Skerrett (2010) found that teachers in Ontario schools feel physically and intellectually isolated within the school. In addition, Shanghai teachers sense more influence of the societal and educational changes in Shanghai and in the country during the ongoing course of China’s opening to the world and modernization. An impression that I had during the principals and teachers’ interviews is that these Shanghai schools and teachers are in a way urged by these changes to be involved in the international school network and other opportunities of learning from “foreign education”. For the participating Ontario principals and teachers, their view on the school partnerships with China seem to reflects the policy of education internationalization in the country, province, and particularly in the school board where these schools are located. Generally speaking, Ontario and the school board involved focus more on student benefit such as the learning attainment of domestic students or recruiting more international students for economic reasons, whereas the implementation of internationalization of education in Shanghai is more fundamental and comprehensive and appears to involve all the stakeholders in the school including principals, teachers, and students. As a result, Shanghai schools are more ready to invest in this kind of international initiative because “China is still in the process of learning from the rest of the world”, as one Ontario principal observes, whereas Ontario school boards and schools might not have too many “political and monetary incentives”, as one Ontario teacher believes, to invest in this kind of opportunity to learn from a developing country such as China.

Related to the differences of motivation to participate, this study finds that, in contrast to Ontario teachers, Shanghai teachers more likely experience challenges and dissonances as to their practical principles and existent knowledge of teaching in the face of new information learned from their Canadian partner teachers. The data suggests that many Shanghai teachers are
somewhat unsatisfied with the current circumstance of education. On the one hand, Shanghai teachers want to get hold of the ongoing societal and educational changes and would like to see more improvement in education; on the other hand, they sense that some systemic obstacles such as the competitive examination system might prevent substantive changes in relation to their practice. This study also finds that different curriculum structure and organization of teaching and learning in Ontario and Shanghai result in teachers’ different ways of linking sister school collaborations to their classroom activities. While some characteristics of the current practice in each place provide the ground for international collaboration, certain domestic requirements of teaching limit the possibility of innovation in teachers’ practice. For Shanghai teachers, the new triplicate curriculum structure seems to provide some room for innovation in terms of cross-system collaboration whereas the perennial pressure of the competitive examination system obviously prevents teachers thinking out of the box. The data shows that Ontario elementary school teachers have more liberty in the implementation of the curriculum than Shanghai teachers, as well as Ontario secondary school teachers, so that they are more readily to accommodate the cross-system collaboration without comprising the teaching of the formal curriculum.

These above comparative findings provide some knowledge about how different sociocultural and educational realities may influence Canadian and Chinese teachers’ reactions and learning experiences when they do have the opportunity to participate in the same INPLCs simultaneously. The educational literature and comparative education literature have offered little knowledge in this regard although substantial research has been done with respect to PLC and networked PLCs in the past decades. Only a few studies applied the concept of PLC to investigate special characteristics of Chinese teachers’ professional learning in within-school PLCs (e.g. Zhang & Pang, 2016; Wong, 2010; Sargent, 2009) or teacher networks as PLCs (Sargent, 2015) in order for other education systems to learn from the Chinese experience. Hargreaves E. et al. (2013) seemed to miss the opportunity to address differences when they studied Hong Kong and London teachers’ experiences in a parallel PLC project since they merely focused on commonalities. The results from these aforementioned studies added knowledge to the PLC and comparative education literature by bringing in the Chinese perspective; however, this study is fundamentally different from these past studies because the comparison in this study is conducted when the participants from two countries literally share the
same experience in the reciprocal learning space. This reciprocal learning research is associated with participants’ collaboration; in other words, without the collaboration the reciprocal learning research will not occur. Precisely, the comparative findings of this study are gleaned from the participants’ experiences of cross-cultural collaborative activities in the Canada-China sister school network. Hopefully, the results and the approach of this reciprocal learning study, which is informed by the traditional PLC and comparative education literature and inspired by the relational understanding of space, can contribute to the scholarly discussions in this respect as international PLCs for teachers become more and more probable in this globalized world (Luke, 2004).

**A verification of teacher reciprocal learning in INPLCs**

**Learning as participation**

This study joins the research on teacher learning in networked PLCs and extends it into one international setting that involves Canadian and Chinese schools and educators. Existent research has shown that school networks and networked PLCs within education systems hold the potential to enhance teacher learning and practice and in turn improve school work and student learning (e.g. Mireles, 2012; Katz & Earl, 2010; Katz, et al, 2008; Morris et al., 2003). Across national boundaries, a few studies provided evidence of teachers’ professional learning in international school partnerships connecting schools in the United Kingdom with schools in African and Asian countries (Edge et al., 2010; 2009; 2008). Building on these earlier scholarly efforts, this study provides another case in point validating the reality that teachers learn as they participate in the INPLCs connecting Canadian and Chinese schools. The findings of this study identify with the learning theories underpinning the idea and practice of PLC that postulate professionals learn as they participate in collaborations and interactions in communities of practice (Wenger, 1998; Lave & Wenger, 1991). While this proposition of social learning theories has been applied and validated many times in the educational research, this study extends its application to an international setting with in-service teachers from different countries being the professional community members. In essence, this study verifies that in-service teachers can also learn from each other meaningfully as they participate in INPLCs.
The tenet of the social learning theories states that learning is an integral aspect of social activities (Lave & Wenger, 1991). Meanwhile, the educational literature indicates that the evidence of learning and hence the benefit of networked PLCs is not easy to be verified (e.g. Mireles, 2012; Chapman & Hadfield, 2009). It has been suggested that the evidence of teacher professional learning in school networks can be found within the activities that constitute the networks (Little, 2005b). Following this suggestion, this study links the evidence of Canadian and Chinese teachers’ reciprocal learning with the collaborative activities in these INPLCs. This study shows that the collaborative activities in these INPLCs between Canada and China constitute the space of learning for teachers in the two places. The reciprocal learning space contains an array of meaningful collaborative activities, including thematic sister school activities, videoconferences, as well as other exchanges corresponding to these main activities. The data shows that teachers learn as long as they engage in these activities involving their international partners, although the cross-cultural collaborations in the school network were not necessarily designed specifically for teacher learning. Indeed, learning and development is fundamentally embedded in social interactions. It is through the participants’ reflection and articulation about their experiences of the collaborative activities that the researcher is able to understand their learning as participation.

**Teacher reciprocal learning**

This study substantiates the idea of reciprocal learning between western and eastern education by providing a teacher learning perspective. The conception of reciprocal learning in the context of the RL project stresses cross-cultural collaboration and mutual learning (Connelly & Xu, 2013; Connelly & Xu, 2015). This study shows that not only teacher professional learning but also mutual learning is an integral part of collaborative activities in these INPLCs involving Canadian and Chinese teachers. This study provides some concrete evidence showing that the teachers in the two places have exchanged knowledge, learned practices, and reshaped professional identity, although understandably Canadian and Chinese teachers’ focuses and benefits of the learning may differ due to their divergent local realities. It shows that the shared knowledge and practices reflect the current situation in the Ontario and Shanghai school education and the participating teachers’ approaches to their respective education and its change. For the Shanghai teachers, they learned about Canadian education by observing it in real time and by collaborating with Ontario
teachers; for the Ontario teachers, they had the same opportunity to observe, collaborate, and learn. Perhaps, this learning experience is more profound for these Ontario teacher participants since they barely had a chance to see Chinese school education before, let alone collaborate with Chinese teachers. Indeed, it is a dialogue between Canadian and Chinese education; it is a deep dialogue of education at the practitioner level that bears the fruit of teacher reciprocal learning.

One of the two directors of the RL project Shijing Xu has been exploring the idea of reciprocal learning between the west and the east for a few years and provided several examples in this regard, including the reciprocal learning between Chinese and Canadian education and culture as Chinese immigrants interact with Canadian school education (Xu, 2011; 2006) and the potential of reciprocal learning for pre-service teacher education between the East and the West (Howe & Xu, 2013). From an in-service teachers’ PLC perspective, this study extends the emerging reciprocal learning research and shows that when teacher practitioners in two countries have opportunities to collaborate they may engage in the community and benefit from the mutual learning. Moreover, this study illustrates that the fundamental goal of the reciprocal learning research is consistent with the tenets of the PLC practice and research and that the cross-cultural reciprocal learning can be realised and enhanced by the INPLC approach. It is noteworthy that the evidence of teachers’ cross-cultural mutual learning has also been found in other international school partnerships and networks (Edge et al., 2009; Veugelers, 2005). Thus, this study joins these earlier international studies and once again validates that collaboration and mutual learning are inherent characteristics of school networks or networked PLCs (Little, 2005a); therefore, the INPLC approach can be applied to the practice and research of cross-cultural reciprocal learning.

Importantly, it should be noted that this study mainly provides evidence of reciprocal learning at the level of individual teachers without addressing the learning at other levels of school education such as students, leaders, or the whole school. The data shows that the teacher reciprocal learning in the Canada-China sister school network is designed to be embedded in teachers’ ongoing practice; therefore, so long as teachers engage in cross-cultural collaborative activities the impact of learning as participation occurs simultaneously. Regardless of teachers’ realizations and positive changes resulting from their participation in the network, the data do not indicate the possibility of linking the cross-boundary professional learning to the main goals of
local educational reforms or school improvement agendas. The evidence from other international teacher communities (e.g. Edge et al., 2010; 2009) also shows that international collaborations cannot easily be linked to essential parts of the school curriculum. Notably, however, the implementation of educational reforms is usually the main purpose of school networks or teacher networks with the education system (e.g. Katz et al., 2009; Veugelers, 2005; Lieberman & Wood, 2003). The data of this study seem to suggest that the Shanghai teachers’ learning in the international school network has some limited bearing on their school work relating to education internationalization partially because their principals proactively involved a group of teachers in the school and judiciously found ways to incorporate the RL project in the school improvement agenda. For these participating Ontario schools, the learning seems only relevant to individual teachers’ personal interests with very limited school-wide sharing and promotion being supported. By and large, it seems that the reciprocal learning in international school networks provides an opportunity for interested teachers to sidestep the system by developing new relationships and exploring new ideas and practices out of their immediate professional boundaries. In that sense, the functionality of international teacher professional communities needs to be justified on a different basis from that of those networks within national systems, which can be justified by good results in relation to domestic educational goals such as student achievement (e.g. Katz & Earl, 2010; Katz et al., 2008).

Impact of the reciprocal learning space

Teachers can learn from each other through collaboration in INPLCs. Now the question remaining is what the evidence of the reciprocal learning is. Little (2005a) has duly pointed out that to uncover the evidence of learning is far more complicated than to claim that the learning occurs when teachers participate in the network since presumably learning is an integral part of the interactions. A few researchers who studied school or teacher networks provided some evidence of teacher learning in networks by showing the impact on teachers’ thinking, practice, and student achievement in the framework of certain educational systems (e.g. Katz & Earl, 2010; Katz et al., 2009; Earl et al., 2006; Morris et al., 2003; Lieberman & Woods, 2003). These results are important and some of them, such as the impact on teachers’ knowledge and pedagogies, can be transferred to the research on teacher learning in INPLCs since the essence of teaching and learning is presumably universal. However, apparently the contexts of national and international
networks differ in many important aspects. For example, the Canada-China sister school network has to deal with Ontario and Shanghai education systems that have contrastingly different curricula, pedagogical focuses, values, and traditions. Relatedly, teachers in the two systems might also have different understandings and needs as to teacher knowledge and professional learning. Therefore, the impact of international school networks on teachers might be more complex than those within education systems, and the investigation of the evidence of professional learning in the international setting probably requires new perspectives and a different framework across national boundaries.

My recent literature review still confirms Edge and Khamsi’s (2012) earlier observation that little empirical research has been conducted to unpack the influence of international professional networks on students, teachers, and educational leaders. Actually, only a few studies investigated educators’ networks or school partnerships in the international setting, although they all provided positive feedbacks as to professional learning and subsequent good effects within the system or schools (e.g. Edge et al., 2010; Stoll et al., 2007). Moreover, it seems that all the relevant studies used a somewhat intuitive approach to examine the influence of network involvement without invoking the existing knowledge about teacher learning. Thus, informed by the theories of teacher learning particularly by the concept of PLC, at the beginning of this study I proposed to investigate the impact on teachers in four aspects—teacher knowledge, teacher practice, professional identity, as well as motivation to participation. Arguably, if teachers do learn in these INPLCs then there should be observable impact on their knowledge, practice, and professional identity. Besides, the examination of sources of motivation can provide explanations for teachers’ participation and commitment, and the change of motivation can reflect the influence of the participation as well. Indeed, the data provide evidence that both Canadian and Chinese teachers were impacted to some extent in all the four areas as the result of the cross-cultural collaboration and learning in these INPLCs.

Teacher knowledge

With respect to teacher knowledge, the data shows that Canadian and Chinese teachers mainly shared and learned features about the other’s education system and school and the knowledge about ways of teaching. Meanwhile, some evidences show that teachers’ personal practical
knowledge (PPK) can be reshaped when teachers reflectively made meanings of the new information by comparing it with their own practice and the home education system. While the initial exchange of factual information might just prompt teachers to engage in further conversations and collaborations, the learned pedagogical knowledge and the reshaped PPK can challenge teachers’ thinking and in turn practice. It should also be noted that what I categorised as learned pedagogical knowledge in this study is also based on individual teachers’ observations of their respective teacher partner’s classroom teaching. That is to say, the pedagogical knowledge that the teachers shared and learned is not in a general sense but rather personal too. Other than these aforementioned types of teacher knowledge, this study finds little evidence of shared curricular knowledge and other teacher knowledge such as content knowledge and pedagogical content knowledge, which were reported by other researchers when they studied teacher networks that primarily focused on certain subject areas (e.g. McDonald & Klein, 2003; Morris et al., 2003). This deviation might be related to the teacher-centered and expert-void approach in which the Canada-China sister school network was built.

Several researchers have argued for the importance of sharing and learning experience-embedded practical knowledge in networks (Katz et al., 2008; Lieberman & Wood, 2003); however, at the same time they also suggest a more desirable balance between practical knowledge and formal, conceptual knowledge with respect to networked professional learning (Katz et al., 2008; Lieberman & Grolnick, 1996). Indeed, this study validates Connelly and Xu’s (2015) vision about the sharing and reshaping of teachers’ PPK through the reciprocal learning in the Canada-China sister school network. Moreover, this study shows that the reshaping of PPK in a cross-cultural setting can be revealed by tapping into parts of the narrative of teachers’ experience and practice. The data reveals that the teacher participants invoked images, metaphors and practical principles related to their teaching when they reflected on the impact of the reciprocal learning experience. Since all the past studies on PPK were conducted within a school system or within a classroom (e.g. Tsang, 2004; Connelly, Clandinin & He, 1997; Clandinin, 1985), this study shows the potential to apply the conception of PPK and related ideas around the concept in an international setting where teachers do have opportunities to engage in deep collaborations that are embedded in their practice.
Nonetheless, it seems that the teacher learning in the nascent Canada-China sister school network is short of other teacher knowledge that might also be possible and valuable for teachers to learn from each other. This missing aspect might come as one side effect of the completely teacher-led approach—on the one hand teachers enjoy the ownership of the partnership activities; on the other hand, they are at risk of being left with little external guidance. As this study reveals, neither did participants have necessary prior knowledge about the other’s education nor did they know how to go about this kind of alternative out-of-the-box learning opportunity. Teachers had to spend substantive time to explore and negotiate on their own before they eventually landed on something workable. It would have been better if teachers and principals were provided with some learning opportunities in advance such as orientation workshops (Edge et al., 2008). With some experts’ knowledge and guidance, teachers would have been more prepared, experienced less frustration, and probably learned more in a way that benefits themselves and their students. Lieberman and Grolnick’s (1996) earlier argument seems still relevant to the international setting: “…a network that deals only with exponential or context-specific knowledge may cut itself off from knowledge that inspires new ideas, expands personal and professional vision, or helps…invent new techniques and processes for improving their practices. In the worst of situations, participants might just be ‘sharing ignorance’ (p. 30)”. All in all, if teachers’ teaching is to expected to change in favour of student learning as the result of their involvement in a school network, the combination of personal knowledge and external expert knowledge, which can assist teachers to examine and share their practices more strategically, is suggested (Katz et al., 2008).

**Teaching practice**

This study shows that the unique properties of the RL project help teachers weld the participation in the network with their ongoing practices in the school. The project encourages educators to come up with, negotiate, and then implement their own partnership plans instead of imposing any research or policy/school improvement agenda on these participating schools in the two countries. Without an explicit external agenda that teachers themselves are also committed to, this study shows that teachers tend to embed collaborative activities in the curriculum and teaching or in within-school extracurricular student learning activities. The interview data indicates that the majority of the collaborative activities in the Canada-China sister school
network are directly connected to teachers’ classroom teaching and mostly involving students as well; and some of these teacher-led thematic activities are evolving to become long term joint curricular or extracurricular projects between schools. Interestingly, these joint projects in the international setting are close to the definition of teachers’ joint work that Little (1990) identified in within-school PLCs and similar to the collaborative inquiry that Stoll (2010) and Katz and Earl (2010) promoted as one key learning process in school networks. Thus, these collaborative activities identified in the international setting seem to have as much potential as those in national school networks to challenge teachers’ thinking and practice, although the focus and benefit of learning might differ. Meanwhile, this practice-embedded approach of professional learning in networks seems to diverge from those common network activities, which are mostly separate from the ongoing school work, such as forums, workshops, and study groups that require more in-person meetings (e.g. Lieberman & Wood, 2003; Lieberman & Grolnick, 1996). Even though these collaborative activities in this study are short of face-to-face interactions due to the geographical distance between Canada and China, their impact on teachers and students’ learning on both sides seems self-evident since they are embedded in the classroom teaching and learning in the first place.

This study shows that it is possible for teachers to bring in new curricular elements and new pedagogical shifts through the international collaboration in a way that does not necessarily compromise the domestic curricular requirements. The data indicates that several Canadian elementary teacher participants devised their curricular teaching innovatively so that they could accommodate the school partnership and benefit students at the same time. For some Shanghai teachers, they found that they were able to make innovations in their teaching in the area of EC (Extended Curriculum) or IC (Inquiry Curriculum) courses. Particularly, some joint activities shifted the teaching in some participating classrooms towards a pedagogy involving international learning partners owing to the convenient technology that facilitates distance collaboration and electronic communication. Fullan and Langworthy (2014) recently describe the desired new pedagogies in the 21st century as “a new model of learning partnerships between and among students and teachers, aiming towards deep learning goals and enabled by pervasive digital access” (p. 2). The finding of this study offers one international example of such new pedagogies. The data shows that through international partnerships and collaborations, some classroom activities are given a new purpose that enhances student learning. Indeed, the pedagogical shift in
those participating classrooms can have an impact on student learning. The data indicates that being involved in an international school network can cultivate students’ global understanding and global competence, though whether those outcomes resulted for participating student was not investigated in this study.

However, given the current structure and scope of activities in the school partnerships, little evidence from the data can show that the impact of these cross-boundary collaborations has spread over these participating classrooms into the school or into the network. Neither can the data prove there are actual links between the international network and teachers’ within-school professional learning communities; nor can the data point to the potential link between the network involvement and school level improvement plans in these participating schools. Actually, the degree of staff involvement contrasts sharply across these participating schools depending on teachers and particularly principals’ interests and will. The Shanghai schools appeared to take a more collegial approach than the Ontario schools; however, it is still only these participating teachers who carried on the collaborative activities in their classrooms when their colleagues merely gave support. Across sister school partnerships, few activities that can enable sharing and learning in the network are evident. It seems that those useful networking activities that were identified in earlier within-system networks (e.g. Lieberman & Wood, 2003; Lieberman & Grolnick, 1996) have not played a role in order to increase the scale and effect of teacher professional learning in the emerging Canada-China sister school network yet. In addition, the data do not support the claim that the collaborative activities must lead to meaningful practice change for all the participants. It is true that teachers might respond differently when they have access to new knowledge and skills and that quite a few of these different responses do not necessarily lead to change in practice (Timperley et al., 2007). In this study, some participants thought it was too hard to implement new knowledge; some tried new ideas and then gave up altogether; and some might think that this cross-cultural collaboration has little to do with their own teaching at all. Certainly, it could also be the case that the linkages between the learning in PLCs and the change in teacher practice are just hard to detect due to the complexity of school work (Little, 2005a; Anderson & Sumra, 2002).
Cosmopolitan professional identity

The social learning theories and the teacher learning research indicate that the participation in networked PLCs can reshape teachers’ professional identity (Lieberman & Wood, 2003; Wenger, 1998). The data of this study shows that some teacher participants heightened or developed a sense of belonging to an international professional community as they engaged with the community. They made new connections, learned from each other, and shared one community identify because of similar educational interests and actions. Teachers also became more open-minded towards new information and different perspectives from the outside world that did not necessarily fit their previous knowledge and beliefs. In other words, they took risks to explore new possibilities internationally and at the same time redefined who they are and what they do individually and collectively. While participants in the two countries probably have no chance to share one collective professional identity associated with a common education system or a common curriculum, they can become cosmopolitan teachers who identify with each other as they all enter “a new community of teachers that could and would work, communicate, and exchange…across national and regional boundaries” (Luke, 2004, p. 1439). It is noteworthy that although this finding regarding teachers’ professional identity confirms the result from national teacher or school networks in principle (e.g. Lieberman & Wood, 2003) it contains a different international angle that needs to be further explored. To resolve the improbable reconciliation of professional identity in school networks, Chapman and Hadfield (2010) have suggested “creating learning contexts that counter-balance strong professional identities with those based on locality....to re-conceptualise educational leadership in terms of generating and transferring knowledge, trust and shared purposes and identities at various levels across education systems and local communities” (p. 778). Although their advice was based on the experiences of networks within the education system, it still illuminates the findings of this study. What they envisioned is a networked professional learning environment that broadens teachers’ local professional identity. The learning environment created by the Canada-China sister school network precisely offers the opportunity for teachers to broaden their local professional identity and add a cosmopolitan element or “sub-identity” (Beijaard et al., 2004) into it through the international involvement.
Importantly, however, the teachers in this study who demonstrated cosmopolitan professional identity still opted to situate the learning and subsequent actions that resulted from the international collaboration into the local reality. The data shows that the teachers linked the learning attainments from the international school network back to their domestic work in the hope of improving the teaching and student learning in the classroom when possible. They made meanings and found (or could not find in some cases) solutions by recognizing or referring to the current situation in the respective school and education. Some of them found ways to take part in the international collaboration by creatively revamping the work in the classroom or in the school; some others were understandably reluctant to take risks in the international arena due to insurmountable local obstacles as to the international collaboration. From my point of view, both approaches are legitimate and both demonstrate one kind of “situated openness”, which means to be open to others while acknowledging diverse particularities but not to regard one particular culture or a universal type as the frame of reference (Healy, 2011). It seems that the RL project that “studies people working together and making inquiry together” without imposing any preferred approach (Connelly & Xu, 2015, p. 13) gives the room for educators to develop this kind of situated cosmopolitan professional identity. Hawkins (2014) contends that the education and its research in the context of globalization need this kind of cosmopolitanism that is “not about changing the nature of places in any particular way…It is about ecological understandings, and coming to see how movements of people, resources, and ideas across space and time contribute to specificities of place, and how these specificities of place mediate understandings of those within them as they encounter difference, build relationships, and collaboratively construct meanings among themselves and global others” (p. 110). The case of teacher reciprocal learning in the context of the RL project provides another example of this kind of situated cosmopolitanism.

Actually, the situated nature of the data collected from the different two cultures and systems enables me not only to examine the impact of reciprocal learning but also compare Canadian and Chinese teachers’ current circumstances of knowledge, practice, and professional identity corresponding to the learning in the school network. The data analysis of this study shows that the impacts of the reciprocal learning space on teacher knowledge, practice, and professional identity can only be understood by taking account of teachers’ existing local conditions prior to the participation. The data reveals that both Canadian and Chinese teachers had little knowledge
of the other, however in different ways, before their participation. The data also reveals that there are contrasting characteristics of teachers’ current practice that may or may not facilitate cross-cultural collaborations and subsequent innovations of teaching. Moreover, it seems that based on the interview data of this study most of these participating Ontario and Shanghai teachers demonstrated a sense of cosmopolitan awareness even prior to the cross-cultural reciprocal learning experience. All these accounts have a bearing on teachers’ subsequent participation, engagement, commitment, and hence the impact of the learning. More importantly, all these accounts reveal that participants’ meaning making and change through the social interactions in the reciprocal learning space are actually situated in and mediated by the local place. Therefore, from the research point of view, the meanings from the data should also be examined by taking the mediational effects of the places (Hawkins, 2014). In other words, the reciprocity or mutuality in the relational learning space cannot and should not escape the places between which the space is created.

**Motivation**

This study illustrates that in general teachers’ motivation to be involved in the cross-cultural, cross-system learning opportunity can be understood in terms of intrinsic and extrinsic reasons. Among these intrinsic and extrinsic sources of motivation, the expectation of cross boundary professional learning, the expectation of benefiting students, and factors associated with teachers’ educational or professional background are common to Ontario and Shanghai teachers, whereas the principal’s authority, colleagues’ influence, and societal and systemic influence are more evident with Shanghai participants than with Ontario teachers. Remarkably, these participating schools and educators on both sides did not receive any kind of financial support from the RL project or from any other the local or international agencies. There is little other support being provided to the schools and the teachers either except graduate students’ coordination and facilitation. This situation makes the understanding of teachers’ motivation to participate in this kind of cross-cultural collaboration and their consequent motivation changes more relevant and important for both practical and academic reasons. After all, the Canada-China sister school network is expected to be sustained after the RL project will end in a few years. If the motivation of participants could not be maintained at a sufficient level, then the sustainability of the international network would be greatly threatened.
This study shows that the teachers’ attitudes towards and engagement in the collaborations in the Canada-China sister school network are associated with the reasons for which they were initially motivated to participate. When some teachers strongly believed in prospective learning benefits for themselves or students from the cross-cultural collaboration, they tended to invest more in the opportunity and in turn engage more deeply in these collaborative activities. Moreover, the data reveals that the motivation can change depending on teachers’ varied experiences and outcomes as the result of the participation. After roughly two years of participation, some teachers became more interested owing to rewarding experiences, some were equally motivated as before, whereas some lost their motivation to continue altogether because they did not see achieved or prospective benefits. These phenomena seem to accord with the social cognitive theory that posits that a person’s motivation and action is regulated by his or her forethought about prospective outcomes of the action and subsequently influenced by the positive or negative results that the person produces for himself or herself under environmental conditions (Bandura, 1999). In the teacher learning literature, Timperley et al (2007) summarized the view that teachers’ engagement is the key to the effectiveness of professional learning and that the engagement is more important than how the learning process is initiated. This study illustrates that different levels of teachers’ engagement in the collaborative activities in INPLCs not only associate with different learning outcomes but also explain positive or negative changes of motivation. The case of some Shanghai teachers particularly supports this claim because even though they were initially pushed into the network by their principals, their subsequent engagement in the process still brought them perceivable benefits and in turn increased their motivation to participate and continue to be involved.

Comparatively, this study shows that behind the seemingly same voluntary-based participation in all the schools Canadian and Chinese participants differ in terms of sources of motivation due to their divergent local realities where they live and work. For Shanghai teachers, learning from the western world and education has become an important ingredient in their thinking and practice because of traditions and the current educational policies as to education internationalization. They also have a lot of opportunities and resources within the education system and from the public media to learn about and from foreign education. In addition, it is a formal requirement for Shanghai teachers to participate in professional learning in order to continue teaching whereas the current Ontario government no longer mandates continuous teacher professional
development in relation to teacher certification. Shanghai teachers feel compelled to look outside the school, the city, and the country because of the influences of the principal, the system, and the ongoing societal changes in Shanghai and in China. On the contrary, Ontario teachers, although they also have a similar kind of curiosity or interest to learn about their Chinese counterparts and Chinese education in general, do not sense the necessity let alone an urgency of learning from the Chinese education. By and large, as Connelly & Xu (2015) observed, learning from China is definitely not a “predominant idea at work” in the Canadian society and education system. For Ontario teachers, the reason for being involved in this Canada-China school network mostly originates from their personal interests, their good will towards creating more learning opportunities for their students, as well as the growing multicultural context they teach in which includes large numbers of Asian heritage students. Really, the professional learning for these Ontario teachers is just a by-product of their participation.

Little comparative education research has shed light on commonalities and differences of teachers’ motivation to participate in international school networks or INPLCs. Edge et al. (2009; 2008) observed a few common reasons for teachers from the United Kingdom and several Asian and African countries to participate in international school partnerships. This study confirms some of their findings, such as the expectation of sharing and professional learning and the hope of benefiting student learning through international collaborations. Moreover, the data of this study suggests that, regardless of individual variations, teachers from different countries and education systems might participate in INPLCs for diversified reasons and that these different sources of motivation can only be understood by linking them to the characteristics of their respective school work, education system, and society. These differences of motivation should have practical implications. Arguably, if teachers’ cross-boundary professional learning is important in this new century, then the INPLC approach must be worth being taken into account. Hence, in INPLC's teachers’ diversified motivations and needs of learning should be carefully considered because they are unavoidable factors that would affect the creation, development, sustainability, as well as outcomes of teacher professional communities in cross-cultural settings.
Organizational conditions

To create an international school network that is conducive to cross-cultural reciprocal learning, educators’ motivation and schools’ commitment are important but not sufficient. This study highlights the point that in order to develop and sustain a school network in the international setting an array of organizational conditions in both the schools and the network are demanded. As I have summarized in the literature review of this study, the literature has proffered a list of organizational conditions that can support school or teacher networks and hence facilitate teacher growth and student learning. While there are some common conditions shared by most networks, such as leadership support, the goal of learning, and a culture of the community, there are still many variations depending on different features of each network and focuses of the corresponding study. These varied suggestions about organizational conditions reflect the complexity and difficulty of creating and sustaining a network involving schools or teachers. This study confirms some of these common conditions; meanwhile, some organizational conditions suggested by the literature do not seem to apply to the emerging Canada-China sister school network. For example, the intention of capacity building for the whole school in those educational reform school networks (e.g. Katz & Earl, 2010; Stoll, 2010; Chapman & Hadfield, 2010) does not seem to be too relevant to the international school network in question. Moreover, this study finds that, in addition to these common organizational conditions that are required by all kinds of networks, an international school network specially needs to handle culture and system differences appropriately and to deal with communication and exchange issues due to the geographic distance.

Notably, two important organizational conditions—teacher participants’ leadership and the culture of the community—are not evident from the findings of this particular study, which focuses on the early development of an international school network. The importance of the two missing organizational conditions as to the PLC and teacher learning is commonly stressed in other network studies (e.g. Katz & Earl, 2010; Day et al., 2002), not to mention the literature on school-based PLCs. It seems that the participants in this study have not created a common culture of the community probably because they have not had substantial direct interactions through either in-person meetings or electronic communications. Due to the distance, time
difference, and pressing domestic responsibilities, the pace and scope of the interactions between the two sides do not easily achieve a satisfactory level. Also, these partnerships between schools and teachers are still rudimentary. If the shared closeness and culture of community are expected to occur then the continuity and frequency of interactions in these partnerships should be ensured, and probably more organizational efforts from both sides are demanded. Besides, research assistants (RAs) of the RL project turned out to be playing such an indispensable role in these teacher communities that teachers tended to completely rely on these RAs as the mediators of the community culture and the facilitators of the activities in the communities. Provided with RAs’ tremendous support, teachers just did not feel it was necessary to take the leadership role for the collaborative activities although they owned the ideas of these activities. In a way, RAs instead of teacher participants become the informal leaders of these communities, which were also described by Earl and Katz (2010; 2007). As such, unwittingly, this kind of excessive reliance on RAs’ facilitation and mediation in the Canada-China sister school network seems to jeopardize the development of teacher leadership and the community culture among teacher members and in turn will impair the sustainability of these INPLCs in a long run after the RL project ends. As a suggestion out of this analysis, it seems very important for external facilitators—the RAs in this study or other people such as university professors in other situations—to be able to deploy some kind of intentional strategies to support teacher participants in forming their own leadership and community culture in INPLCs.

This study’s findings about organizational conditions are mostly consistent with the observations in similar international networks or partnerships in education (Edge et al., 2009; Edge et al., 2008; Stoll et al., 2007). Both this study and Edge et al. (2009) point out that the existing connections prior to the network or partnership are important factors to be taken into account. Particularly, Edge et al. (2008) stressed the importance of building an effective communication infrastructure at the early stage of international school partnership formation. This study also finds that the emerging Canada-China sister school network needs to improve its communication infrastructure to mitigate an array of difficulties caused by the differences of time, language, and communication tools. In contrast to Edge et al.’s (2009; 2008) findings, this study highlights the importance of understanding and handling cultural and system differences if the collaborative activities in the international networks are to take root in schools or classrooms. The data of this study reveals that divergent configurations of teaching and learning, contrasting curricula and
pedagogies, and inconsistent communication culture, and even different approaches to student rights created obstacles for the formation and development of the Canada-China sister school network and the sustainability of the collaboration and professional learning. In addition, this study finds the need for local education authority’s support due to the special partnership arrangement of the RL project. It seems that the partnership arrangement, which does not direct research funding to research schools, complicated the early development of the Canada-China sister school network. This situation is markedly different from those international partnerships involving schools in the United Kingdom where funds from multiple sources ensured the formation and development of these partnerships (Edge et al., 2010; 2009; 2008).

There could be a few reasons contributing to the deviations of this study’s findings from the literature related to networked PLCs. One, each network can be different from the other due to different focuses and combinations of members and different features of each network may require different organizational designs and supports. Little (2005a) duly pointed out that the research and practice of networks in education include different types of network such as school networks, teacher networks, or the networks of individuals with the same special interests. Some of them are associated with policy implementation agenda whereas others can be regarded as voluntary-based professional development networks (Niesz, 2007). Despite these differences, however, these networks all form learning communities and share some important characteristics such as teachers’ indispensable involvement and the intention to improve teaching and learning within the school. Thus, all of these networks can be legitimately investigated in terms of teacher professional learning and its supportive conditions. For the Canada-China sister school network, it is an emerging international school network without any policy or reform agenda; it involves schools, educators, and university researchers internationally; and yet the degree of each school’s investment in the future network relies on the principal and the teachers’ discretion. Considering these special characteristics, I do not differentiate school networks and school partnerships in this study because I think that the latter can be regarded as the building units of the network. Indeed, the Canada-China sister school network began with building one-to-one school partnerships while a larger cross-national school network is expected to take shape gradually. Strictly speaking, according to the data of this study, the Canada-China sister school network might not qualify as a real network per se by the end of the first two project years since it basically operated at the school partnership level while networking activities across partnerships were not
evident. Notably, some network infrastructure was available at the outset, including the involvement of partnered school boards, shared external facilitators across school partnerships, and annual conferences and general meetings where network wide sharing are supposed to take place. Nevertheless, the data of this study suggests that these available networking conditions in the nascent Canada-China sister school network have not been utilized in order to strengthen the network development. In addition, this study suggests that other measures that can connect school partnerships to become a true network, such as a common electronic communication platform, are desired by teacher participants too. In any event, I believe that the experience from the new Canada-China sister school network, be it a real network or just a group of school partnerships involving a limited number of teachers in the two countries, can still contribute to the knowledge on building and sustaining international networks in education that possibly enable teacher and student learning.

Two, the international setting of the Canada-China sister school network makes a difference too. Unlike those within-system networks that are usually associated with educational reforms, international school networks are usually directed and justified either by the goal of global education (Edge & Khamsi, 2012) or by out-of-the-box professional learning (Stoll et al., 2007). The sister school network in this study is governed by an ideal of cross-cultural reciprocal learning. Consequently, international school networks might have to rely on voluntary participation and teachers or schools participate mainly because of their special interests, which may or may not directly relate to the domestic educational requirements. Moreover, international school networks have to deal with different traditions, cultures, and education systems, in addition to the particularities of each school and each teacher that are also relevant to national school networks. These additional elements of international school networks may further complicate the creation, development, and sustainability of the networks and associated INPLCs. In addition, this study examines the early formation of an international school network. The data suggests that the early development and subsequent sustainability of an international school network are arduous and probably demand more organizational efforts than those within-system networks and those existing local or international networks. In the next section, based on the foregoing discussions on the impact on teachers and organizational conditions, I will propose a tentative model of teacher reciprocal learning in international school networks in the hope of contributing to future practice and research in this regard.
Conclusion: A tentative model of teacher reciprocal learning in INPLCs

This exploratory comparative study depicts a unique case of teachers’ cross-cultural, cross-system professional learning between Canadian and Chinese education. The cross-boundary professional learning takes place in an emerging Canada-China school network where educators in the two countries are forming internationally networked professional learning communities (INPLCs). The two connected Chinese and Canadian education belong to two geographically distant places—the East and the West, which differ in many important aspects such as ethnicity, culture, tradition, and educational values. In contrast to the majority of past studies that investigated teacher learning in networked PLC or PL networks in national education systems, this study takes a step further to probe into teachers’ professional learning in an inter-cultural setting given that these teachers are also provided with the opportunity to collaborate across their local boundaries. More importantly, this study squarely focuses on the two-way reciprocal learning as practitioners from two countries interact and collaborate with each other. This approach departs from the prevalent ways of doing comparative education research—either investigating one education system or comparing two or more systems with no participants’ interactions.

Drawing on the literature about teacher learning in PLCs and networked PLCs, this study answers why teachers are motivated to participate in the cross-cultural school network, what they have been doing in it, what they learned through the international collaboration, and how they and their work have been impacted. Overall, this study validates the potential value of cross-cultural mutual learning through schools and practitioners’ collaborations that are embedded in their ongoing school work. Teachers on both sides mutually benefitted from the experience in multiple aspects although the content and degree of their attainments depend on individual teachers’ commitment and engagement and local organizational support in their schools. Among all the benefits, the opportunities of learning new ways of teaching, trying new pedagogies by bringing international learning partners into the classroom, and raising global awareness are particularly relevant to the teacher learning in international school networks against the backdrop of globalization. Importantly, this study also stresses that an international school network
involving different cultures and systems is hard to build and sustain. The creation and sustainability of the network and the potential benefits for teachers, students, and the schools have to come with persistent efforts by funding agencies, involved educational institutes, participating schools and teachers, as well as external facilitators such as researchers in the case of this study. In addition, this study shows that whether or not supportive organizational conditions are available can not only affect the development of the network but also directly affect teachers’ motivation and the sustainability of their cross-boundary professional learning.

It has been pointed out that the evidence around school networks is not strong enough to make casual claims although admittedly networked PLCs are potentially beneficial to educational change (Chapman & Hadfield, 2009). I believe that an action-oriented model of teacher reciprocal learning can be helpful for both future practice and research in this regard. Specifically, I hope a tentative model for research and practice can lead to the discussion on causality research although this study itself does not intend to make causal claims. Earlier, McDonald and Klein (2003) have observed that there is a theoretical gap in terms of networked PLCs; and therefore they offered suggestions for theorizing network design including knowledge aims, knowledge sources, learning environment, and evidence of impact. Later, Earl et al. (2006) and their later corresponding studies also proposed and tested a theory of action for networked learning communities, to which I have referred in the conceptual framework of this study. Besides, Stoll (2010) provides a model that highlights teachers’ learning activities and supportive conditions in school networks. Inspired and informed by these earlier efforts and based on the information gathered from the first two years’ development of the Canada-China sister school network, I will modify the conceptual framework of this study and hence propose a model of teacher reciprocal learning in INPLCs as the following Figure 3 presents. Nonetheless, this new model should be regarded as a tentative result as far as the Canada-China sister school network is concerned because the network itself is still developing and changing. Further development of the network after the completion of this study’s data collection may affect the results of the study. For instance, recently there are more schools in Windsor, Chongqing, Changchun, Shanghai, and Beijing joining the sister school network in addition to the eight participating schools reported in this study. Also, two teachers from one Ontario school visited their partner school in Shanghai in March 2016, which is the third project year. In addition, a group of Windsor sister school principals attended the third annual conference and general meeting of the RL project in
Chongqing in April 2016. They met the principals and teacher participants of their Chinese sister schools, and they took part in school visits and group discussion sessions alongside the Chinese participants at the conference. These new changes will definitely influence the dynamics of the network and teachers’ learning experience within it.

Firstly, this new model modifies the previous conceptual framework of this study and adds that in order to create an effective cross-cultural reciprocal learning space for teachers, the social, cultural, and organizational and policy context of different places need to be taken into consideration in advance. Moreover, ideally, the differences and commonalities between education systems and schools need to be examined before the school network is formed. Subsequently, it is desirable that participants of the network including principals and teachers, as well as researchers if applicable, can have some orientation workshops in order to discuss and familiarize with these differences and commonalities that can be either conducive or inhibitive to the forthcoming international collaborations. For the research purpose, knowing these differences and commonalities can enhance the understanding of the processes, content, and effects of the international school network and associated teacher INPLCs. The findings of this study has clearly indicated that the difference between the two places on the one hand provides the source of learning and motivation for learning precisely because they contrast with each other; on the other hand, the difference poses difficulties and challenges to the development and sustainability of the international school network as well as INPLCs. When building a school network within a certain education system the matter of context might not be so important since the schools and teachers in the network basically share the same or similar social, cultural, organizational, and policy context; however, the awareness and analysis of different context of different places that are involved in international school networks or the like is proved to be crucial.
Figure 3 A tentative model of teacher reciprocal learning in INPLCs
Secondly, supportive within-school and within-network organizational conditions need to be examined and created if they are not available. According to the results of this study, in order to create and sustain a school network that is conducive to teacher reciprocal learning, participating schools should ensure the principal’s support and involvement, provide some on-site coordination, elicit students and parents’ support, allocate sufficient time for teachers’ participation, assure relatively long term commitment, and involve the local educational authority when necessary. Prior to the formation of the international school network, the local or international agency who initiates it needs to examine existing network conditions such as historical connections between and among schools and existing personal connections. External facilitation and mediation should be provided to the network due to inevitable cultural, linguistic, or systemic divergences between or among schools in the international setting. As the network operates and develops, participating educators alongside external facilitators then need to handle cultural and systemic differences, negotiate the partnership or network goals and focuses, and manage communication difficulties. In-person meetings are desirable prior to or at the beginning of the network in order to build strong initial relationships and to enhance mutual understanding. If prior in-person visits are not realistic then visits during the process of collaborations are still desirable. In addition, the external facilitators of the network need to cultivate the community culture among teacher members and foster teacher participants’ informal or formal leadership as to the network activities and the teacher community. It is often the case that the external facilitators will not stay within the network forever; therefore, teachers will have to pick up the responsibility of the network after the facilitators’ departure.

Thirdly, this new model suggests that teacher reciprocal learning occurs as teachers participate in collaborative activities between and/or among schools. The forms of activities can be joint curricular or extracurricular initiatives proposed and operated by teachers from participating places. Videoconferences are desirable too because they play a very important role in building the community and directly exchanging information and knowledge. Also, other forms of communication and material exchanges are encouraged too in order to enrich the substance of the collaboration and mutual learning. In addition to these job-embedded collaborative activities, as the foregoing discussion have suggested, the development of the network also needs specific networking activities that can facilitate sharing and learning beyond one-to-one school partnerships. The proposed new model of teacher reciprocal learning in INPLCs intentionally
highlights the importance of networking activities in addition to collaborative activities. In the previous conceptual framework, I did not particularly differentiate networking activities from the category of collaborative activities, which I intuitively believed encompasses all activities between schools, among schools, and in the network. However, the lesson from the early development of the Canada-China sister school network suggests that networking activities actually need to be deliberately designed and organized if the real network is expected to come into being in time. If school partnerships are the building units of the network and if networking activities are not intentionally supported, then the development of the network might just stagnate in the stage of separate partnership relationships for a long time. The worst case might be that there would be no real network at all. This unwelcome situation would greatly reduce the value of the “network” and limit the potential of the anticipated cross-cultural exchange and learning in contrast to what a real international school network can offer. The experience of the China-Canada sister school network suggests that the further development of the network can capitalize on annual conferences or meetings, existing personal connections among schools and with involved local education authorities, and those shared external facilitators across school partnerships. As well, a common electronic communication platform is desired in order to improve participants’ synchronized or unsynchronized communications and exchanges.

Fourthly, this model links the impact on teacher learning with the collaborative activities between or among schools and with networking activities. This model proposes four key areas where the evidence of learning can be found, including teacher knowledge, teacher practice, professional identity, and the motivation to participate. This study has shown that the teachers in the two different places can be mutually influenced by their participation in the reciprocal learning space consisting of collaborative activities. Also, the foregoing discussion suggests that it is worthwhile to examine teachers’ prior conditions about the four areas in order to better understand the impacts on teachers. Certainly, students and principals in the school are also likely involved in the network, and hence they might be influenced by these collaborative and networking activities too. However, this model opts to only focus on teacher reciprocal learning but not to address the impact on other people in the network. This model also suggests that teachers’ engagement in the activities in the network and the consequently perceived rewards from the network can also influence the operation of these activities and hence the development of network. In this regard, this new model again extends the previous conceptual framework in a
way that verifies an earlier conjecture that there might be cyclic effects of teachers’ experience and learning on the collaborative activities and on the development of the network itself. In addition, there might be some mutual effect between collaborative activities and networking activities although the relationship between the two types of activities are not found in this study because the latter has not been taken advantage of by the participants so far.

**Limitations**

Firstly, the findings of this study mainly rely on teachers and principals’ self-reporting. Some objective observations about these participants were conducted as the researcher worked for the larger RL project; however, these observational data were not used as primary data for this particular study, and no observational data were particularly collected for this study. Participants’ opinions and knowledge are valid and important; however, the evidence would have been stronger if some observational data for the purpose of this study could be collected and analyzed. For instance, some observations about the impacts in the four aspects of teachers that this study proposes may provide more convincing evidence that could lead to desirable causality claims. Moreover, most of these teacher interviews were conducted individually. While individual interviews elicited participants’ deep reflections on their experiences, this method of data collection might not be able to fully capture the sense of community, which the teachers on the two sides were slowly cultivating through conversation and collaboration. It could be the case that both the immaturity of the Canada-China sister school network and the limitation of individual interviews contributed to the lack of community culture in these INPLCs as I pointed out earlier in this chapter. It would be ideal if Canadian and Chinese teachers had been interviewed together in groups taking into account the PLC and network approach of this study; however, for this small study it did not seem to be practical due to many logistical reasons such as interpretation and the time difference between the two places. While I believe the collective evidence of teacher reciprocal learning in the Canada-China sister school network assured the credibility and validity of the study, a research design that combines individual and community perspectives could be more consistent with the theoretical foundation of the study.

Secondly, related to the limitation of the data of the study, the strength of the findings across the four areas of impact on teachers varies. In contrast to teaching practice and professional identity,
teachers could more readily talk about their motivations to participate and provide information about the changes of the motivations during their interviews. Similarly, teachers could more easily report what they learned and offered in terms of knowledge through the cross-cultural collaboration. Meanwhile, principals’ interviews provided more useful information about teachers’ motivation. Therefore, as a researcher, I feel more confident about the findings related to the impact on teacher motivation and teacher knowledge. In terms of the impact on teaching practice and professional identity, although this study found evidence that showed potential impacts that were grounded in teachers’ current practice and thinking, these changes seem to more rely on my interpretation than on participants’ direct narratives; therefore, these results need to be verified with more substantial evidence in future studies.

I have discussed two other limitations related to the research method of this study in Chapter 5. I continue to reflect on these limitations after I completed the study. Thirdly, there is a limitation about the sampling of this study. The participants are not particularly recruited for this study since they have already been involved in the larger RL project. Given a sample of convenience, the participants of the study might not be representative of the teacher populations in Ontario and Shanghai, not to mention Canada and China. Therefore, it is not the researcher’s intention to generalize the results of this study in a way that they can be applied to all teachers in Canada and China. At most, these participating educators’ unique experience shows the possibility and ways of cross-cultural reciprocal learning, and the results of this study can contribute to the existing knowledge on teacher learning in educational networks, particularly in INPLCs. Fourthly, this study is conducted at the end of the second project year of the larger RL project, which will not end until the year 2020. Certainly, the Canada-China sister school network will continue evolving in the following project years. Therefore, the findings of this study are tentative and non-conclusive as to the results of the larger RL project. For instance, there might be more networking activities in the future and they will definitely influence teacher participants’ learning experience in the network as opposed to the partnership. Therefore, some findings of this study might have to be revised in the future as more collaborative activities and networking activities take place in the network.
Suggestions for future research

More comparative studies on in-service teachers’ cross-cultural professional learning need to be conducted. While this study contributes to the knowledge of teacher professional learning in a cross-cultural setting, little comparative research has been conducted on teacher learning in PLCs and networked PLCs. This study has shown that teachers from two different countries may have similar or different reactions to professional learning opportunities outside their immediate professional boundaries. Their motivation to participate might be different; and they might be influenced differently in terms of teacher knowledge, practice, and professional identity. At the same time, this study also contrasts organizational conditions that can support or inhibit the development of INPLCs between Canadian and Chinese schools. Future research can look into these aforementioned aspects comparatively in order to enhance mutual understanding and learning with regard to teacher professional learning between and among different countries and education systems.

More reciprocal learning research involving the education in the east, the west, or other cultures is suggested. This emerging reciprocal learning research features practitioners’ direct collaboration and mutual learning while researchers investigate participants’ experiences, reactions, and the impact simultaneously. Both this study and other earlier studies in this fashion have shown scholarly and practical values of this reciprocal learning research. Informed by the understanding of relational space, this study illustrates an approach of reciprocal learning research that focuses on teachers’ collaborations and learning in the space. Future research in this regard can focus on the development process and content of collaborations among network participants and try to establish more robust relationships between these collaborations and the impact of the learning. If an international school partnership or international school network is to be established for the purpose of reciprocal learning and its’ research, then sufficient core funding provided by international, national, or local agencies and alternative funds should be elicited and ensured because of the foreseeable demanding organizational requirements. Given the inevitable expense of building and sustaining these kinds of international networks, it might be wise to add some kind of cost-benefit analysis component to future analysis. This cost-benefit analysis can be conducted for the purpose of improving the allocation of fund and other
resources in the network or justifying the outcomes of the network. In addition, since this study only deals with Canadian and Chinese education, it would also be beneficial to include more education systems in future reciprocal learning research.

The evidence of teacher reciprocal learning in this study mainly relies on participants’ reports instead of objective observations. Although teachers and principals’ interview data provide valid evidence of learning in terms of teacher knowledge, teacher practice, and cosmopolitan professional identity, future research with observational data is desirable. For instance, in order to discern change, a researcher can observe classrooms and compare teachers’ teaching and students’ learning before and after teachers have participated in INPLCs. For teacher knowledge and professional identity, a prior and a post survey might be good instruments to identify the impact on participating teachers. The reciprocal learning process is definitely more complex than this study was able to assess; therefore, a fuller and deeper investigation of the impact on teachers needs more information out of the virtual space. While the study primarily focused on the reciprocal learning space between the two places, I acknowledge that teachers continue to “learn” while they attempt to incorporate new ideas and practices into their teaching; therefore, more information should be collected in their classrooms or related to teachers’ instructional practices in the future. Particularly, the evidence of the impact on teaching practice and professional identity might need special care in future studies. Ideally, a larger and more diverse sample of teachers is also desirable. With the expanding of the Canada-China sister school network, a larger teacher sample who have similar reciprocal learning experiences is possible. With these objective observations from more participants, it is possible for future research to establish causal claims between the network participation and the impact of learning. In addition, this study only focuses on teachers although the data has suggested that other people in these participating schools might be impacted too. Also, it seems that the development of some participating schools is likely impacted by this kind of international initiatives depending on the degree of involvement of the school leadership. Therefore, besides teacher learning, future research can look into the reactions, experiences, and impact on participating students, principals, as well as other people within the participating schools.
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Appendices

Appendix A

Participants’ attributes

<table>
<thead>
<tr>
<th>School pairs</th>
<th>Informants</th>
<th>Role in the school</th>
<th>Education</th>
<th>Immigrants (ET)</th>
<th>Years of teaching</th>
<th>Visited the other country</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School Pair 1</strong></td>
<td>C\textsubscript{P}1</td>
<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>E\textsubscript{P}1</td>
<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>Yes (Board delegation); but not the sister school</td>
</tr>
<tr>
<td></td>
<td>C\textsubscript{T}1</td>
<td>Computer teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>E\textsubscript{T}1</td>
<td>Computer teacher and Mandarin teacher</td>
<td>PhD</td>
<td>First generation Canadian</td>
<td>More than 20</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>E\textsubscript{T}2</td>
<td>Assistant language curriculum leader, French teacher</td>
<td>Master</td>
<td>First generation Canadian</td>
<td>More than 20</td>
<td>No</td>
</tr>
<tr>
<td><strong>School Pair 2</strong></td>
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<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>C\textsubscript{V}P1</td>
<td>Vice principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>C\textsubscript{V}P2</td>
<td>Vice principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>E\textsubscript{P} 2</td>
<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>C\textsubscript{T} 2</td>
<td>Psychology teacher</td>
<td>Master</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>E\textsubscript{T} 3</td>
<td>Social study teacher</td>
<td>Master</td>
<td>First generation Canadian</td>
<td>5 to 10</td>
<td>Yes but for tourism and not the sister school</td>
</tr>
<tr>
<td></td>
<td>C\textsubscript{T} 3</td>
<td>Math teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
</tr>
<tr>
<td>School pair 3</td>
<td>CP3</td>
<td>Principal</td>
<td>/</td>
<td>No</td>
<td>/</td>
<td>Yes, previous project, the sister school</td>
</tr>
<tr>
<td>-------------</td>
<td>------</td>
<td>-----------</td>
<td>---</td>
<td>----</td>
<td>---</td>
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<tr>
<td></td>
<td>CVP3</td>
<td>Vice principal</td>
<td>/</td>
<td>No</td>
<td>/</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>EP3</td>
<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>CT10</td>
<td>Homeroom teacher and math teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>CT11</td>
<td>Math teacher</td>
<td>Master</td>
<td>No</td>
<td>Less than 5</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>ET8</td>
<td>Homeroom teacher</td>
<td>Master</td>
<td>First generation Canadian</td>
<td>10 to 20</td>
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</tr>
<tr>
<td>Code</td>
<td>Position</td>
<td>Education</td>
<td>Nationality</td>
<td>Experience</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>CT12</td>
<td>Homeroom teacher and Chinese teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>Yes, previous project, the sister school</td>
<td></td>
</tr>
<tr>
<td>CT13</td>
<td>Science teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CT14</td>
<td>Chinese teacher and curriculum leader</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CP4</td>
<td>Principal</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CT15</td>
<td>English teacher and curriculum leader</td>
<td>Bachelor</td>
<td>No</td>
<td>10 to 20</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CT16</td>
<td>Homeroom teacher and Chinese teacher</td>
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<td>No</td>
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<td></td>
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<tr>
<td>CT17</td>
<td>English teacher</td>
<td>Bachelor</td>
<td>No</td>
<td>Less than 5</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>CT18</td>
<td>Student extra-curriculum leader</td>
<td>Bachelor</td>
<td>No</td>
<td>More than 20</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>ET10</td>
<td>Homeroom teacher</td>
<td>Bachelor</td>
<td>Born in Canada</td>
<td>More than 20</td>
<td>Yes, previous project, the sister school</td>
<td></td>
</tr>
<tr>
<td>ET9</td>
<td>Homeroom teacher</td>
<td>Bachelor</td>
<td>Born in Canada</td>
<td>More than 20</td>
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<td></td>
</tr>
</tbody>
</table>
## Appendix B

### Sister school partnerships start dates

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<tr>
<th>School Pairs</th>
<th>Start date</th>
<th>End time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Secondary Schools</td>
<td>February, 2014</td>
<td>Ended in September 2015</td>
</tr>
<tr>
<td>Pair 2 Secondary Schools</td>
<td>March, 2014</td>
<td>Paused since November 2015</td>
</tr>
<tr>
<td>Pair 3 Elementary Schools</td>
<td>October, 2013</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Pair 4 Elementary Schools</td>
<td>May, 2014</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>
Appendix C

Individual interview guideline (teacher)

个人访谈提纲（研究对象：教师）

Project: Teacher reciprocal learning in international professional communities between Ontario and Shanghai schools

研究课题：教师在安大略和上海跨国专业共同体中的互惠学习

Purpose of interview（访谈目的）:

The purpose of the interview is to understand teachers’ interaction, experience, and learning in the emerging Canada-China school network and professional communities and to understand what and how various conditions support or inhibit the formation and development of transnational school network and teacher professional communities.

本次访谈的目的是为了理解教师在中介学校网络和专业共同体中的互动交流和学习体验。同时，也为了理解什么样条件支持或者阻碍了跨国学校网络和教师专业共同体的形成和发展，以及这些条件如何起作用。

Notes to interviewee (受访者须知):

1. Thank you for your participation in sister school activities and in this interview! (感谢您参与姐妹学校活动和本研究！)
2. The confidentiality of your responses is guaranteed. (受访内容保证保密。)
3. You may skip questions you do not want to answer and you may withdraw from this study at any time. (您可以跳过任何不愿回答的问题，也可在访谈过程之任何时间退出本研究。)
4. The interview will last approximately 40 minutes. (访谈时间约 40 分钟。)

Date (日期)  __________________________
Location (访谈地点) __________________________
Interviewee (受访者) ______________________

Do you agree to participate in the interview?

你同意参加本次访谈吗?
Interview Questions

1. Can you please describe what sister school activities you participated in and with whom you collaborate?
   请简单描述你参加了哪些姐妹学校的活动? 在那些活动中你适合谁进行合作?

2. Can you describe one typical activity that you participate in or collaborate with your sister school?
   你可以简单描述一个典型的姐妹学校活动吗?

3. For what reasons are you attracted to participate in the Canada-China sister school network? Factors may include, but not limited to, your personal background, the characteristics of your school, the characteristics of your students, the characteristics of the school community.
   Follow-up question: Can you describe your personal background (or any factors that the interviewee brings out) more? Has your motivation to participate changed? Why?
   是什么原因吸引你（让你）参加到中加姐妹学校网络的？（原因可以包括，但是不限于，你的个人背景，你的学校的特点，你的学生的特点，你学校所在社区的特点等）
   后续问题：请描述你的个人背景（或者被访者提及的其他原因）
   后续问题：你参加姐妹学校活动的动机或积极性改变了吗？为什么？

4. What did you share or collaborate with your colleagues in the Chinese/Canadian sister school?
   What would you like to share or collaborate with your sister school colleagues in China/Canada?
   你跟你姐妹学校的同事们分享了什么? 或者共同合作做了什么?
   你希望你跟姐妹学校的同事分享什么或者进行什么合作?

5. What do you think the Chinese/Canadian teachers/school can learn from you/your school through the collaboration? And what can you/your school learn from the Chinese/Canadian teachers/school?
   你觉得你姐妹学校和那里的老师可以向你和你的学校学习什么?
   你觉得你能向你的姐妹学校和那里的老师学习什么?

6. How does your participation in sister school exchanges and activities connect to your practice or your consideration of your practice? Can you please give some examples?
   你是如何将你所参加的姐妹学校活动跟你的日常教学（日常学校工作）结合起来的；或者是如何跟你对日常工作的思考结合起来的（如何还没有实质性的结合的话）?
   请给出几个例子。

7. How does the participation in sister school activities impact your knowledge of teaching? Examples?
   参加姐妹学校的活动对你的关于教学知识有何影响？请举例。

8. How does the participation in sister school activities influence your perception of the role of a teacher in this globalized world? Examples?
   参加姐妹学校的活动如何影响你对教师角色的认识，尤其是在当今全球化的情境之下?请举例。
9. Does the collaboration with Chinese/Canadian teachers influence your understanding of Chinese/Canadian teachers? What are the influences?

你跟加拿大老师的合作是否影响了你对加拿大的认识？有哪些方面的影响？

10. What insights or alternate perspectives arising from this collaboration have substantively influenced your thinking about education or teaching?

Follow-up question: What assumptions did you have about teaching and learning that this collaboration has caused you to question?

哪些在姐妹学校合作中出现的见解或不同的角度实质性地影响了你对教育或教学的思考？

后续问题：姐妹学校的活动是否使得你重新思考（或者挑战）你原有的关于教与学的理解？

11. Do you think it is useful for your school to have sister school partnership and participate in sister school exchanges and activities?

How your school’s participation in sister school activities influence the practice of your schools?

Please give some examples.

你觉得参加姐妹学校合作和交流活动对你们学校有用？

姐妹学校活动如何对你们学校的工作产生影响？请举出例子。

12. What kind of difficulties did you see in terms of sister school partnership and sister school activities?

对于姐妹学校关系的建立和姐妹学校的活动，你看到了哪些困难？

13. What kind of support did you get for your participation in the sister school activities? Support may include, but not limited to, those from your principal, from your colleagues, from your students, from the school in general, from the from the local education authority (school board), university support including research assistant support.

你参加姐妹学校活动得到了什么样的支持？（支持可以包括，但是不限于，校长支持；同事的支持；学生的支持；学校各方面的支持；教育局的支持；大学的支持包括研究生助理的支持）

14. What can be done to improve the sister school exchanges and collaborations so that these activities are more useful to you/your students/your school?

你觉得姐妹学校的交流和合作的哪些方面可以改进，以使得这些活动对你（或者你们学校）更加有用？
Appendix D

Individual interview guideline (principal)

个人访谈提纲（研究对象：校长）

Project: Teacher reciprocal learning in international professional communities between Ontario and Shanghai schools

研究课题：教师在安大略和上海跨国专业共同体中的互惠学习

Purpose of interview（访谈目的）:

The purpose of the interview is to understand teachers’ interaction, experience, and learning in the emerging Canada-China school network and professional communities and to understand what and how various conditions support or inhibit the formation and development of transnational school network and teacher professional communities.

本次访谈的目的是为了理解教师在中介学校网络和专业共同体中的互动交流和学习体验。同时，也为了理解什么样条件支持或者阻碍了跨国学校网络和教师专业共同体的形成和发展，以及这些条件如何起作用。

Notes to interviewee (受访者须知):

5. Thank you for your participation in sister school activities and in this interview! (感谢您参与姐妹学校活动和本研究！)

6. The confidentiality of your responses is guaranteed. (受访内容保证保密。)

7. You may skip questions you do not want to answer and you may withdraw from this study at any time. (您可以跳过任何不愿回答的问题，也可在访谈过程之任何时间退出本研究。)

8. The interview will last approximately 40 minutes. (访谈时间约 40 分钟。)

Do you agree to participate in the interview?

你同意参加本次访谈吗？
Interview Questions

1. Can you please describe what sister school activities your school participated in? 
   请简单描述你的学校参加了那些姐妹学校的活动？

2. For what reasons are you and your school attracted to participate in the Canada-China sister school network? Factors may include, but not limited to, the need of societal development, your personal background, the characteristics of your school, the characteristics of your students, the characteristics of the school community.
   后续问题：请描述你的个人背景（或者被访者提及的其他原因）
   后续问题：你参加姐妹学校活动的动机或积极性改变了吗？为什么？

3. What did your school share or collaborate with your sister school in the Chinese/Canadian sister school?
   你跟你姐妹学校分享了什么？或者共同合作做了什么？

4. What do you think the Chinese/Canadian teachers/school can learn from you/your school through the collaboration? And what can you/your school learn from the Chinese/Canadian teachers/school?
   你觉得你姐妹学校和那里的老师可以向你和你的学校学习什么？
   你觉得你能向你的姐妹学校和那里的老师学习什么？

5. How does your participation in sister school exchanges and activities connect to your practice or your consideration of your practice? Can you please give some examples?
   你是如何将你所参加的姐妹学校活动跟你的日常工作结合起来的；或者是如何跟你对日常工作的思考结合起来的（如果还没有实质性的结合的话）？
   请给出几个例子。

6. Do you think it is useful for your school to have sister school partnership and participate in sister school exchanges and activities?
   你觉得参加姐妹学校合作和交流活动对你们学校有用？
   姐妹学校活动如何对你们学校的工作产生影响？请举出例子。
7. How does the participation in sister school activities influence your perception of the role of a teacher in this globalized world? Examples?
    参加姐妹学校的活动如何影响你对教师角色的认识，尤其是在当今全球化的情境之下?请举例。

8. Does the collaboration with Chinese/Canadian teachers influence your understanding of Chinese/Canadian education and teachers? What are the influences?
    你跟加拿大老师的合作是否影响了你对加拿大教育和教师的认识？有哪些方面的影响？

9. What insights or alternate perspectives arising from this collaboration have substantively influenced your thinking about education or teaching?
    Follow-up question: What assumptions did you have about teaching and learning that this collaboration has caused you to question?
    哪些在姐妹学校合作中出现的见解或不同的角度实质性地影响了你对教育或教学的思考？
    后续问题：姐妹学校的活动是否使得你重新思考（或者挑战）你原有的关于教与学的理解？

10. What kind of difficulties did you see in terms of sister school partnership and sister school activities?
    对于姐妹学校关系的建立和姐妹学校的活动，你看到了哪些困难？

11. What kind of support did your school get to participate in the sister school? What kind of support did you give your teachers to participate in the sister school activities?
    你的学校参加姐妹学校活动得到了什么样的支持？你是如何支持你的教师参加姐妹学校活动的？

12. What can be done to improve the sister school exchanges and collaborations so that these activities are more useful to you/your students/your school?
    你觉得姐妹学校的交流和合作的哪些方面可以改进，以使得这些活动对你（或者你们学校）更加有用？
Appendix E

Initial Code List

<table>
<thead>
<tr>
<th>Supporting Conditions</th>
<th>Examples/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural resources in school</td>
<td>time, allowance, award</td>
</tr>
<tr>
<td>Trust culture in partnership</td>
<td></td>
</tr>
<tr>
<td>Available communication infrastructure</td>
<td>Wechat, Skype, QQ, Email</td>
</tr>
<tr>
<td>Facilitation and coordination</td>
<td></td>
</tr>
<tr>
<td>Goals of partnership</td>
<td>tied with school goals, established focus, tied with personal interest</td>
</tr>
<tr>
<td>Social cultural factors of school</td>
<td>learning culture in school, student demographics, school feature,</td>
</tr>
<tr>
<td>Local education authority support</td>
<td></td>
</tr>
<tr>
<td>Historical connections to network</td>
<td></td>
</tr>
<tr>
<td>School administration support and involvement</td>
<td></td>
</tr>
<tr>
<td>Inhibiting Conditions</td>
<td></td>
</tr>
<tr>
<td>Difficulties in communication</td>
<td>language, time difference, overlapping communication; no common communication</td>
</tr>
<tr>
<td>Exisiting workload</td>
<td>release time, extra work</td>
</tr>
<tr>
<td>Sustainable commitment</td>
<td>lose interest, staff change</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>collective involvement versus individual involvement; principal authority driven</td>
</tr>
<tr>
<td>Education System differences</td>
<td>Grade system, curriculum requirement, EC and IC, subject specialist and all-sub</td>
</tr>
<tr>
<td>Teacher knowledge</td>
<td>teacher</td>
</tr>
<tr>
<td>Knowledge about other education system</td>
<td></td>
</tr>
<tr>
<td>Pedagogical knowledge and strategies</td>
<td></td>
</tr>
<tr>
<td>Knowledge about other culture</td>
<td></td>
</tr>
<tr>
<td>Curricular knowledge</td>
<td></td>
</tr>
<tr>
<td>Personal practical knowledge</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Teacher motivation</strong></td>
<td></td>
</tr>
<tr>
<td>Personal interest</td>
<td></td>
</tr>
<tr>
<td>Principal's authority</td>
<td></td>
</tr>
<tr>
<td>Benefit student</td>
<td></td>
</tr>
<tr>
<td>Teacher education background</td>
<td></td>
</tr>
<tr>
<td>Teacher professional experience</td>
<td></td>
</tr>
<tr>
<td>New knowledge and skills</td>
<td></td>
</tr>
<tr>
<td>Student and parent stimuli</td>
<td></td>
</tr>
<tr>
<td>Teacher's choice</td>
<td><strong>state it on the outset, the nature of the RL project</strong></td>
</tr>
</tbody>
</table>

| **Cosmopolitan identity**    |  
| Belonging to international group | **being connected to a large global classroom; being aware of audience in other country** |
| Global awareness             | **environment education, water protection** |
| Developing understanding of the other | **understanding other's culture** |

| **Teacher practice**         |  
| Pedagogical change           |  
| Linking to school-based PLC  |  
| Linking to teaching local curriculum | **open new EC, planning alongside the other's curriculum,** |

| **Reciprocity**              |  
| Evidence of reciprocity      |  
| Evidence of not reciprocity  | **lead and follow, different level of enthusiasm)** |
## Final Codes and Definitions

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub theme</th>
<th>Code in Atlas</th>
<th>Definition of code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Conditions</strong></td>
<td>Within school</td>
<td>Sup:structural resources</td>
<td>The resources and support provided by the school and school administration, such as school coordinator, time, space, technology, bonus or awards associated with the project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inh:board</td>
<td>Lacking of support from the school board or counter examples.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inh:time</td>
<td>Participants don't have much time to devote to the sister school activities due to existing workload, pressure of current work, no release time, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inh:sustainable commitment</td>
<td>Participants show unsustainable commitment due to various reasons such as seeing difficulties, perceiving low benefit, losing interest, staff change, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sup:school principal</td>
<td>Support from the school principal or vice principal. Also, principals' cosmopolitan identity/awareness as a support condition is included.</td>
</tr>
<tr>
<td></td>
<td>Support:student and parent</td>
<td></td>
<td>Supported by students' and parents' participation and enthusiasm.</td>
</tr>
<tr>
<td><strong>Within INPLC</strong></td>
<td>Inh:goal of partnership</td>
<td></td>
<td>Evidence shows that participants report they are not clear about the goal of the project or the sister school partnership after even two years. In some cases, they come up with a goal between two schools.</td>
</tr>
<tr>
<td></td>
<td>Sup:in person visit</td>
<td></td>
<td>Experiences and expectations of in person visit in the sister school as a supporting condition to develop and sustain the partnership.</td>
</tr>
<tr>
<td></td>
<td>Sup:facilitator</td>
<td></td>
<td>Support from research assistant sent by the universities.</td>
</tr>
<tr>
<td></td>
<td>Inh:difficulties in communication</td>
<td></td>
<td>Difficulties in communication resulted from language barrier, time difference, lacking of communication protocol, lacking of communication platform, lack of in-</td>
</tr>
<tr>
<td>Impact on knowledge</td>
<td>Types of knowledge shared and learned</td>
<td>Knowledge change</td>
<td>Knowledge change</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>Education system</td>
<td>As one goal of reciprocal learning is to increase mutual understanding, this code describes evident knowledge change resulted from participation including changed prior knowledge or learned new knowledge.</td>
<td>This code records evidence that new information creates dissonance in teachers' knowledge but not necessarily leading to perception change.</td>
</tr>
<tr>
<td>System differences</td>
<td></td>
<td>This code records evidence that knowledge or biases or misunderstandings do not change or even are reinforced, not necessarily in a negative manner, after participation.</td>
<td></td>
</tr>
</tbody>
</table>

**Teacher Knowledge**

- **Inh: cultural differences**
  - Cultural differences of the two sides that caused difficulties in collaboration such as collective involvement versus individual involvement; principal authority driven versus voluntary basis; and student privacy issue.

- **Inh: system differences**
  - Differences in the two education systems that cause difficulties in exchange and collaboration, such as grade system, curriculum structure and focus, strictness of the curriculum, subject specialist versus all-subject classroom teacher.
<table>
<thead>
<tr>
<th>Know:pedagogical</th>
<th>Teacher share and/or learn knowledge of teaching, either general pedagogical knowledge or teaching strategies of a particular subject such as mathematics.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know:curricular</td>
<td>Teacher share and/or learn the knowledge of both local curriculum and the other's curriculum by comparing and reflecting.</td>
</tr>
<tr>
<td>Know:Personal practical</td>
<td>Teacher reflect on learning by invoking personal practical knowledge or showing reshaped personal practical knowledge, which captured by image, metaphor, practical principle, and personal philosophy, etc.</td>
</tr>
</tbody>
</table>

**Teacher motivation**

<table>
<thead>
<tr>
<th>Sources of motivation/Intrinsic</th>
<th>Moti:teacher background</th>
<th>Motivation is related to teachers' personal, educational, and/or professional experience. Also, this code can be linked to teacher demographic information such as education level and teaching years.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of motivation/Extrinsic</td>
<td>Moti:cross boudary professional learning</td>
<td>Motivation is caused by participants' expectation of cross boundary professional learning through the international collaboration.</td>
</tr>
<tr>
<td>Moti:benefit students</td>
<td>Motivation is caused by participants' perception of students' benefit out of the sister school partnership.</td>
<td></td>
</tr>
<tr>
<td>Moti:principal authority</td>
<td>Motivation is caused by school principal's directives, interest, and support.</td>
<td></td>
</tr>
<tr>
<td>Moti:colleagues</td>
<td>Influenced by other teachers or evidence of sister school collaboration linking to in-school PLC such as sharing with other colleagues.</td>
<td></td>
</tr>
<tr>
<td>Moti:environment</td>
<td>It includes the evidence in which participants talk about influences outside the school buildings such as society, policy, alternative learning opportunities related to the education of the other country, etc.</td>
<td></td>
</tr>
</tbody>
</table>

**Impact on motivation/Positive**

| Moti:change:positive | Evidence of participants' change of motivation, increased or unchanged. |
| Impact on motivation/Ne
gative | Moti:change:negative | Evidence of participants' change of motivation, decreased. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cosmopolitan professional identity</strong></td>
<td>Evidence of cosmopolitan identity</td>
<td>Cosm:international community</td>
</tr>
<tr>
<td></td>
<td>Cosm:sensitive to other culture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cosm:openminded</td>
<td></td>
</tr>
<tr>
<td>Impact on teacher identity</td>
<td>Cosm:change</td>
<td>Evidence of changed professional identity because of the participation.</td>
</tr>
<tr>
<td><strong>Teacher practice</strong></td>
<td>Current practice</td>
<td>Practice:current</td>
</tr>
<tr>
<td>Impact on practice/Action</td>
<td>Prac:pedagogical change</td>
<td>Evidence of change of teaching strategies or thinking of different ways of teaching and learning.</td>
</tr>
<tr>
<td></td>
<td>Prac:alter local curriculum</td>
<td>Evidence of sister school collaboration linking to local curriculum or other school work, for example open a new EC, accommodating teaching plan, or joint teaching plan, etc. This code focuses on actions actually occurred. Three levels: extension, integration, and creation.</td>
</tr>
<tr>
<td>Impact on practice/Thinking</td>
<td>Prac:impact thinking of work</td>
<td>Evidence of impact on teachers' thinking of their work such as teaching practice and educating students but NO real actions were taken.</td>
</tr>
<tr>
<td>Impact on practice/Thinking(Counter)</td>
<td>Prac:impact thinking of work:limited</td>
<td>Evidence of limited impact on teachers' thinking of their work. This code also capture the evidence that current practice is inhibiting condition for practice change (such as intensiveness of Shanghai BC and the tightness of Ontario high school curriculum, etc.).</td>
</tr>
<tr>
<td><strong>Reciprocity</strong></td>
<td>Recip:evidence</td>
<td>Evidence that shows learning through collaboration and/or two-way learning.</td>
</tr>
<tr>
<td></td>
<td>Recip:evidence:offer</td>
<td>Capture participants' perceived offering of knowledge to the sister school.</td>
</tr>
<tr>
<td></td>
<td>Recip:evidence:understand project</td>
<td>Captures participants’ understanding of the goal and feature of the project and china-canada sister school network.</td>
</tr>
<tr>
<td>Recip:counter evidence</td>
<td>Evidence that shows learning is perceived as one way or collaboration does not facilitate professional learning. Also, this code registers the evidence that shows participation or approach to participation is not reflective between the two sides, such as one side leading whereas the other following, or different level of enthusiasm, or even different numbers of participants.</td>
<td></td>
</tr>
</tbody>
</table>
## Teacher Analysis Table (Examples)

<table>
<thead>
<tr>
<th>School Pairs</th>
<th>Informants</th>
<th>Activity Participated</th>
<th>Conditions for partnership and learning</th>
<th>Motivation</th>
<th>Cosmopolitan Identity</th>
<th>Knowledge</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School Pair 1</strong></td>
<td><strong>ET1</strong></td>
<td>Joint teacher study; and planning Student exchange program</td>
<td>&quot;need more support from the Board&quot;; the principal is &quot;very reserved&quot;</td>
<td>personal interest: publishing and travel, benefit student, new knowledge; motivation unchanged</td>
<td>&quot;help me realize the importance and emergence of global view&quot;-international community</td>
<td>&quot;know more about publicly funded high school in Shanghai&quot; but not yet achieve this learning goal due to &quot;beginning phase&quot; of collaboration</td>
<td>Extension (student exchange will benefit students in Mandarin class) and adds-on (research as the head of technology); limited impact on thinking and practice due to &quot;myself is a Chinese&quot; and collaboration is &quot;in its the beginning phase&quot;</td>
</tr>
<tr>
<td><strong>School Pair 2</strong></td>
<td><strong>CT 2</strong></td>
<td>Student survey</td>
<td>structural resources in school, facilitator</td>
<td>academic interest related to subject; personal interest (travel, practice English); motivation becomes &quot;more and more curious&quot;</td>
<td>very open-minded &quot;we might see others achieve very good outcomes using very different approach&quot;</td>
<td>gained knowledge about Canadian education &quot;how Canadian schools to study project&quot;, &quot;nobody...can order them to do things during their off-time&quot;</td>
<td>Adds-on; but his open-mindedness brings more impact &quot;need to reflect on this difference&quot;,</td>
</tr>
<tr>
<td>ET7</td>
<td>Sharing History teaching, video, curriculum, syllabus, teaching materials</td>
<td>no release time--&quot;release time becomes crucial...because it determine how focused I am gonna be and what my product would be&quot;; no school support; only RA support; need in person visits; need better communication infrastructure; &quot;our schools are very different from the sense I get&quot;</td>
<td>&quot;high (student) population the come from China&quot;; &quot;interested in seeing what the education system was like in China&quot;; benefit students--&quot;better understand the learning system that they have been used to&quot;, motivation diminished because &quot;the relationship didn't unfold in the way that I envisioned&quot;</td>
<td>not only teach subject but also influence character...&quot;when I look at that, these are areas that I can probably learn something from someone who is teaching in another place in the world...&quot;; &quot;the world is coming to me...I have to be sensitive to that&quot;; impact on Cosmopolitan--&quot;made me a bit more understanding, when they come in, they are not used to...the leniency of our education system..&quot;</td>
<td>confirmed prior knowledge about Chinese rote learning; &quot;a lot more standardized testing that I was ever aware of...&quot;</td>
<td>Adds on; &quot;it's hard to think of something that is essentially an extra-curricular thing&quot;, but ET7 wanted to find a way to incorporate it into curriculum--&quot;I would've been better invest in the program if I had been doing something is truly cross-cultural at student level...then I can work them into my classroom activity&quot;</td>
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<td><strong>School pair 3</strong></td>
<td><strong>CT10</strong></td>
<td>Sharing math teaching and class management with the partner</td>
<td>time is too tight; teaching in regular curriculum is too full; &quot;We focus on knowledge delivery and organize teaching into knowledge units, whereas their teaching is oriented by problem solving. So, I was feeling difficulty in the collaboration due to the disparity (It is like using donkey lips to match horse mouths).&quot;</td>
<td>mostly because of principal's persuasion</td>
<td>have some limited knowledge about USA education but know little about Canadian many realizations and reflections on pedagogies after she observed The partner's ways of teaching and educating students; her observation also create dissonances about her teaching</td>
<td>Adds-on: &quot;Unfortunately, I felt it is an extra work for me (laugh). Why? Firstly, it is an extra in terms of time. Secondly, even if it becomes an extension of one existing work of mine, the extension is an extra too. Thirdly, if I share the work that we are doing, I still need to input extra time and energy.&quot;</td>
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<tr>
<td><strong>ET8</strong></td>
<td>Sharing math teaching, sharing class management, taught Tangram, water education unit; sharing cultural activities with CT12</td>
<td>&quot;school administration has no goal and purposes&quot;; the current principal is not really involved; &quot;principal is supportive of what I am doing&quot; but the principal didn't promote the project properly; having autonomy to &quot;bent curriculum&quot;; commitment change initially interested in the idea of &quot;global PLC&quot; (see Dec, 5, 2013 project meeting by YK); student activism; love to do something about environmental science; always passionate about PLC and partnering with other teachers; strong global awareness in terms of environmental protection; vision of global classroom characterized by student interaction and collaboration</td>
<td>Changed knowledge on Chinese education because of the project</td>
<td>Built in: part of program for both Tangram and Water education</td>
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<tr>
<td>School pair</td>
<td>CT17</td>
<td>as principal move to bring some change to the school by involving more teachers.</td>
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<td>Pen pal; movie commentary (but she doesn't seem to be very familiar with the movie activity)</td>
<td>Difficulties: communication; time; needs a better communication infrastructure. Support: team culture of the school, principal involvement, RAs</td>
<td>benefit student (English learning); moti changed: &quot;inconvenient...the project is very good&quot;</td>
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<td>learn about foreign education through internet and movies; &quot;It is not to say that we should completely borrow from them. They are from overseas after all. The better way is, I think, to use others' strengths to make up for our weak points (idiom from Mencius 取长补短).&quot;</td>
<td>&quot;see many differences...learn from these differences&quot;; from abstract knowledge to concrete understanding; some English teaching skills; a few new realizations about her students (such as ability of writing their ideas)</td>
<td>Built-in—pen pal letter writing; some changes in teaching students' writing—let students write to a real person</td>
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<td>CT18--On site coordinator</td>
<td>In-school project coordinator (extra-curriculum-art work; school events); Skype meetings; structural resources in school (in house coordinator); curriculum-international understanding; school cultural--teamwork</td>
<td>Personal interest, work responsibility: &quot;As an educator, I am keen to know, to learn in-depth about details of education in that Canadian school&quot;; moti also enhanced by NBER background</td>
<td>&quot;Out teachers’ outlook and the activities that we organized for students are all confined to the campus. It is extremely meaningful and valuable for our kids to have opportunities to directly learn about students’ school life in a foreign country&quot;</td>
<td>Canadian student assessment; Built-in (work related to extra-curriculum activities): &quot;Actually my hope is to provide ongoing learning opportunities for students, just like the sister school partnership&quot;; Limited: &quot;mainly focused on students’ learning and life at school. Little had been touched with regard to other interested topics of mine&quot;</td>
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<td>ET9</td>
<td>Pen pal, sharing student art work</td>
<td>Almost all students have connections in China; in person visit enhance understanding...need more in person visit; curriculum support--writing unit and learning expectations in social study on global awareness; school principal's trust, RA support</td>
<td>Benefit students and personal educational pursuit: &quot;For me it was exciting because I see their faces in enthusiasm. They really want to understand China.&quot;; &quot;My fascination has always been China.&quot;; &quot;It is like a ripple. We are just two schools; it is small...but it might have a ripple effect down the road. &quot;; &quot;it began more enhanced, more and more motivated...&quot;</td>
<td>Sense of being living in a global community, on the top of current international events, always pay attention to China; belief in kids can make a better world</td>
<td>Confirmed that Chinese education is rote, repetitive and Canadian students is more creative; &quot;we need both...critical thinking and knowledge and skills&quot;</td>
<td>Built-in the curriculum teaching</td>
<td></td>
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</tbody>
</table>
Appendix H

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH-Interview

(School Board Administrator/Principal/Teacher Participant)

参与研究同意告知信

(研究对象：有关的教育局领导、校长、教师)

Title of Project: Reciprocal learning in teacher education and school education between Canada and China

研究课题：加拿大-中国教师教育及中小学教育互惠学习

This project is co-directed by Dr. Shijing Xu, from the Faculty of Education at the University of Windsor and Dr. Michael Connelly from the Ontario Institute for Studies in Education, University of Toronto (OISE/UT), with research team members Drs. Jim Cummins, Mark Evans, Grace Feuerverger, Gila Hanna, Ruth Hayhoe, Jim Hewitt, Douglas McDougall, James Slotta at OISE/UT, and Drs. Jonathan Bayley, Anthony Ezeife, Martha Lee, Geri Salintri, Bruce Tucker, Zhang Zuochen, George Zhou at the University of Windsor.

该研究由温莎大学教育学院许世静教授和多伦多大学安大略研究院的Michael Connelly教授共同主持。参与研究的温莎大学课题组成员还有：多伦多大学安大略研究院的Jim Cummins教授，Mark Evans教授，Grace Feuerverger教授，Gila Hanna教授，Ruth Hayhoe教授，Jim Hewitt教授，Douglas McDougall教授，James Slotta教授；温莎大学的Jonathan Bayley教授，Anthony Ezeife教授，Martha Lee教授，Geri Salintri教授，Bruce Tucker教授，张佐臣教授和周国强教授。

If you have any questions or concerns about this qualitative study mentioned above, please feel free to contact Dr. Shijing Xu, the Principal investigator, Project Director, at 519-253-3000, ext. 3828, or Dr. Michael Connelly, Project Co-Director, at 416-592-3050.

如果您对本次质性研究有任何疑问，您可通过以下方式联系我们的项目负责人：

许世静博士  519-253-3000 (分机号码 3828)

Michael Connelly 博士  416-592-3050

PURPOSE OF THE STUDY

研究目的

The overall goal of the Partnership Grant Project supported by Social Sciences and Humanities Research Council of Canada (SSHRC) is to compare and contrast Canadian and Chinese education in such a way that the cultural narratives of each provide frameworks for understanding and appreciating educational similarities and differences. The summarized objectives of this research are (1) to build knowledge and understanding from a cross-cultural perspective, (2) to support new approaches to research on a complex important topic (K-12 education) that relates to societal challenges of improving education in the context of globalization, and of addressing the needs of a culturally diverse school population, and (3) to mobilize knowledge towards professional, policy-maker and public audiences with the aim of social and economic benefit within the global
environment. Our overall goal centers on reciprocal learning in teacher education and school education between Canada and China.

本项目得到加拿大社会科学和人文学科研究委员会(SSHRC)的合作基金支持。本项目总体旨在通过比较和对照加中两国教育的文化特征以提供理解和领会两国教育中的异同点。本研究的目标概述如下:

1) 从跨文化视角来促进认识与理解;
2) 支持新的研究方式以在全球化的框架下探讨中小学教育议题如何透过多元文化的角度来改善因社会变迁造成挑战;
3) 以在全球化背景下创造社会经济福利为目的,促进专业人士、决策者及公众的相关认知。

我们的总体目标关注于加拿大和中国之间教师教育和中小学教育的互惠学习。

More specifically, this part of inquiry is to cover the research activities associated with the sister school network development. It includes individual interviews and focus group interviews with school board administrators, principals and teachers involved in the sister school reciprocal learning activities between Canadian and Chinese schools. The purpose of the individual interview is to understand your cross-cultural interaction and reciprocal learning experience between Canadian and Chinese schools. The purpose of the focus group interview is to debrief sister school interactive activities to identify the strengths of both school systems that can be useful for reciprocal learning between Canada and China. Moreover, we would appreciate it if you could share any materials (e.g., lesson plans, school video clips, photos, visuals and artifacts) that are relevant to or would help enhance sister school reciprocal learning as well as for the purpose of the knowledge mobilization of the SSHRC Partnership Grant project.

确切来说，此部分研究旨在了解与加中姊妹学校交流发展有关的研究活动。其中包括对参与加中姊妹学校互惠学习项目的有关教育局管理人员、学校校长以及教师的个人访谈和焦点团体访谈。

个人访谈的目的旨在了解您的跨文化交流和互惠学习的经历。焦点团体访谈在于讨论姊妹学校间的交流活动，从而甄别加中不同学校系统的长处，并对两国间的互惠学习有所帮助。此外，我们将十分感谢您愿意分享的教案材料（例如课程教案、学校视频、照片、视觉材料和其他作品）。这将更好的促进姊妹学校间的互惠学习以及实现加拿大社会科学和人文学科研究委员会(SSHRC)合作项目知识动员的目的。

PROCEDURES

研究过程

If you agree to participate in the individual interview, you will be asked a series of questions in order to understand your cross-cultural interactions and reciprocal learning experiences between Canadian and Chinese schools. We will provide individual interview guidelines at your request. The interview will last for 40-60 minutes at a place of your convenience. We will record the interview with your consent.

If you agree to participate in the focus group interview, you will be able to debrief sister school interactive activities to identify the strengths of both school systems that can be useful for reciprocal learning between Canada and China. We would also like you to discuss different ways of teaching. We will provide focus group
interview guidelines at your request. The focus group interview will last for 60-90 minutes at a place of your convenience. We will record the focus group interview with your consent.

如果您同意参与本次个人访谈，我们将询问您一些问题，以便了解您对本次加中跨文化互惠交流学习的经历。在您的要求下，我们可以提供个人访谈指南。访谈大概需要40-60分钟，访谈地点选在您方便接受采访的地方。如果得到您的允许，我们会对访谈进行录音。

如果您同意参与本次焦点团体访谈，您将与我们探讨加中不同学校体系的优势，这些优势将有助于加拿大的互惠学习。我们也会讨论不同的教学方法。在您的要求下，我们可以提供焦点团体访谈指南。焦点团体访谈大概需要60-90分钟，访谈地点选在您方便接受采访的地方。如果得到您的允许，我们会对访谈进行录音。

POTENTIAL RISKS AND DISCOMFORTS
可能存在的风险与不便

Your participation is voluntary and you may withdraw at any time. We will do our best to minimize the risks and discomforts by making the research a positive experience for you and engage you in sharing with and learning from one another through the sister school reciprocal learning activities. We will not make any evaluation of the participants while conducting individual interviews and focus group interviews. If there are any questions that you would not like to answer, please skip them.

参与本次研究是自愿的并可随时退出上述研究，我们将尽力减低会对您本人构成任何潜在的风险或不便并帮助您分享您与来访姊妹学校的互惠学习活动。个人访谈和焦点团体研究过程中，您本人及访谈内容不会受到任何评价。您可自行跳过任何不愿回答的问题。

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
对研究对象/社会的潜在效益

You will have an opportunity to share and reflect on your cross-cultural interactive learning experiences in the sister school reciprocal learning activities and identify the strengths of both school systems that can be useful in your own schools/classrooms. The sister school network and communication will help broaden your horizons as educators. Your intercultural, interaction and experience will be valued, which will in turn contribute to the success of the project of building a reciprocal learning environment between Canada and China.

通过参与本次研究，您可以分享您在姊妹学校互惠学习活动中的跨文化交流学习经历。您还可以识别有助于您自己学校或班级的两个教育系统的长处。此次姊妹学校的互动和交流将拓宽您作为教育者的视野。您的跨文化知识与经验十分重要，因为它将是对成功建立加中两国互惠学习环境这一项目目标的大力支持。

COMPENSATION FOR PARTICIPATION
参与报酬
There is no direct financial compensation to you.

本研究没有直接经济报酬。

CONFIDENTIALITY

保密性

Due to the fact that we have constant contact with you as participants, anonymity will not be achieved during the process of data collection. However, we will ensure anonymity in transcripts, data analysis, and research reports by using pseudonyms, so that your real identities will not be revealed.

由于我们与您有经常性的联系在研究过程我们无法做到匿名，但我们将确定在笔录与数据分析时使用假名，所以您的真实身份将不被显示。

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will not be disclosed to a third party.

任何与此研究收集到的相关原始数据将不会泄露给第三方。

PARTICIPATION AND WITHDRAWAL

参与及退出

You can choose whether to be in this study or not. If you volunteer to participate in the individual interview and/or focus group interview, you may withdraw at any time without consequences of any kind. You can stop participating at any time during the focus group discussion. However, any data you may have contributed will be retained and/or included in the study.

您可选择是否参与个人访谈、焦点团体访谈其中的一项，也可两项访谈都参加。访谈过程中，您作为研究对象有权选择退出并不用承担任何后果。您在团体访谈时可随时退出，但是您退出前的对该研究所提供的信息将被保留。

You may also refuse to answer any questions during the interview that you don’t want to answer and still remain in the study.

在访谈过程中您可选择拒绝回答任何不想回答的问题。

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

研究对象的研究结果反馈

The research findings from this study will be available to you on the University of Windsor REB webpage (www.uwindsor.ca/reb). Upon request, we can make your interview transcript available for you to review after the transcription is done.
本次的研究结果将在温莎大学研究伦理委员会(REB)网页上公布。如果您需要，我们可以在访谈录音转录之后让您查看有关您的访谈内容。

SUBSEQUENT USE OF DATA

数据的后续使用

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

本次访谈收集到的数据将被用于后续研究、出版及研究展示。

RIGHTS OF RESEARCH PARTICIPANTS

研究对象的权利

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

如果您有任何关于您作为研究对象相关权利的问题，请联系：加拿大安大略省，温莎大学，研究伦理协调人员，邮编：N9B 3P4；电话：519-253-3000, 分机号码 3948；邮箱：ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

研究对象签名/法人代表签名

I understand the information provided for the study Reciprocal learning in teacher education and school education between Canada and China as described herein. I have been given a copy of this form. My questions have been answered to my satisfaction, and I agree to participate in (please sign to give consent)

Individual Interview 个人访谈 (Initial 签名__________)

Focus Group 焦点访谈 （Initial 签名__________）

我理解上述关于“加拿大-中国教师教育和中小学教育互惠学习”研究的信息。我持有此表格的副本。我提出的问题得到满意的回答，我同意参加此次研究（请签名同意）。

____________________________________
Name of Participant 研究对象姓名

____________________________________   ___________________
Signature of Participant 研究对象签名  Date 日期

SIGNATURE OF INVESTIGATOR 研究者签名
These are the terms under which I will conduct research.

以上将是我在本研究中将遵守的条款。

Signature of Investigator 研究者签名  Date 日期
## Videoconferences

<table>
<thead>
<tr>
<th>School pairs</th>
<th>Time</th>
<th>Main topics</th>
<th>Participants</th>
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<tbody>
<tr>
<td><em>School Pair 1</em></td>
<td>February 28, 2014</td>
<td>First principal meeting, discussed direction of the partnership, exchanged general information about the schools, discussed student exchange program and possible sharing on teaching</td>
<td>1 CP and 1 EP</td>
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<td>March 26, 2014</td>
<td>Further sharing school information, discussed student exchange program and exchange activities prior to the trip</td>
<td>1 CP, 1 EP, 1 CT, 3 ETs</td>
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<td></td>
<td>May 15, 2014</td>
<td>Exchanged progress of the preparation work for the student exchange program, discussed possible issues when students visit the sister school</td>
<td>1 CP, 1 EP, 2 ETs</td>
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<tr>
<td></td>
<td>January 29, 2015</td>
<td>Reported progress of student recruitment for the exchange program, negotiated about the dates of the exchange trips and the number of students</td>
<td>1 CP, 1 EP, 2 ETs</td>
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<td>February 4, 2015</td>
<td>Exchanged information on the use of technology in each school, discussed possible design for a joint teacher study</td>
<td>1 CT and 1 ET</td>
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<tr>
<td></td>
<td>February 28, 2015</td>
<td>Discussed two study designs, decided to start writing an introduction section for the joint study</td>
<td>1 CT and 1 ET</td>
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<tr>
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<td>April 17, 2015</td>
<td>Discussed the introduction section written by the Chinese teacher, discussed the interview design of the study</td>
<td>1 CT and 1 ET</td>
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<tr>
<td><em>School Pair 2</em></td>
<td>March 3, 2014</td>
<td>First principal meeting, discussed the direction of the partnership, exchanged general information about the schools</td>
<td>1 CP, 1 CVP, and 1 EP</td>
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<td>April 17, 2014</td>
<td>Discussed and decided the collaboration on two subjects areas mathematics and social study, discussed initial collaborative plans; determined contact persons in both schools</td>
<td>1 CP, 2 CVPs, 1 EP, 3 CTs, 2 ETs</td>
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<td>Date</td>
<td>Event</td>
<td>Participants</td>
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<tr>
<td>June 3, 2014</td>
<td>Discussed exchange activities in math and psychology, discussed a student psychology survey</td>
<td>1 EP, 3 CTs, 2 ETs</td>
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<tr>
<td>October 29, 2014</td>
<td>Math group Skype meeting, provided feedback on exchanged teaching video, discussed collaboration on TI teaching, mentioning AP math teaching following an Oct. 7 project meeting</td>
<td>2 CTs, 2 ETs</td>
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<tr>
<td>October 30, 2014</td>
<td>History and Physics groups Skype meeting, exchanged main teaching content and teaching methods, discussed the exchange of teaching video</td>
<td>1 CVP, 4 CTs, and 2 Ets</td>
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<tr>
<td>January 27, 2015</td>
<td>Second principal meeting, discussed progresses on the exchanges of math (TI and AP), physics, and history, tentatively decided to focus on math, brought up a new project--student Eco-school group</td>
<td>1 CP, 1 CVP, 1 CT, 1 EP</td>
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<tr>
<td>March 6, 2015</td>
<td>Math group skype meeting, discussed issues associated with exchanging teaching video, discussed the plan of teaching AP math in the Chinese school,</td>
<td>3 CTs, 1 ET</td>
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<tr>
<td>March 10, 2015</td>
<td>First Skype meeting between students' Eco-school teams, described each teams' current environmental initiatives</td>
<td>1 CP, 1 CVP, 1 CT, 12 Chinese students, 1 EP, 1 ET, 4 Canadian students</td>
<td></td>
</tr>
<tr>
<td>October 7, 2015</td>
<td>Math group skype meeting, one Chinese teacher reported his experience of teaching AP math, planned TI collaboration for the new semester, proposed to share teaching plans of common topics</td>
<td>2 CTs, 2 ETs</td>
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<tr>
<td>November 30, 2015</td>
<td>Third principal meeting, Canadian principal reported teacher strike in the school board and proposed to pause the partnership</td>
<td>1 CP, 1 EP</td>
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<tr>
<td>October 10, 2013</td>
<td>First principal meeting, discussed direction of the partnership, exchanged general information about the schools</td>
<td>1 CP, 1 EP, 1 EVP</td>
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<tr>
<td>Date</td>
<td>Description</td>
<td>Participants</td>
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<tr>
<td>November 7, 2013</td>
<td>Exchanged more information about each school including parental involvement, student discipline, and efforts in environmental protection</td>
<td>1 CP, 1 CT, 1 EP, 1 EVP</td>
<td></td>
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<tr>
<td>December 5, 2013</td>
<td>Exchanged more information about each school including features of curriculum, methods of student assessment, within-school teacher professional learning community</td>
<td>1 CP, 1 CVP, 2 CTs, 1 EP, 1 EVP, 2 ETs</td>
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</tr>
<tr>
<td>February 13, 2014</td>
<td>Introduced new Chinese teacher participants, Chinese teachers described students' activities during winter break, discussed future sister-class activities</td>
<td>1 CP, 3 CTs, 1 EP, 1 EVP, 1 ET</td>
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<tr>
<td>May 29, 2014</td>
<td>Principals discussed details about their roles and responsibilities basing on their exchanged work logs, discussed teachers development and students assessment</td>
<td>1 CP, 1 CVP, 1 CT, 1 EP</td>
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<tr>
<td>June 26, 2014</td>
<td>Chinese students shared their school life and activities in holidays; teachers exchanged ways of dealing with student disciplinary issues; also exchanged information on math teaching and teacher development</td>
<td>2 CTs, 1 EP, 1 ET, 2 Chinese students</td>
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<tr>
<td>September 17, 2014</td>
<td>Discussed exchanged teacher's work log, exchanged about students' classroom life, and discussed possible collaborations for this semester</td>
<td>1 CT, 1 ET</td>
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<tr>
<td>October 24, 2014</td>
<td>Chinese teachers shared Tangram curriculum and teaching; Canadian teacher shared math teaching and integrated teaching; discussed sister class activities</td>
<td>2 CTs, 1 ET</td>
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<tr>
<td>March 5, 2015</td>
<td>Shared learning obtainment by reading or watching each other's water science teaching; planned follow-up activities of water week, shared pros and cons in each other's practice, Canadian teacher shared ideas behind her teaching and the features of the curriculum</td>
<td>1 CP, 2 CTs, 1 ET</td>
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</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td>Participants</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
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<tr>
<td>May 27, 2015</td>
<td>Students in the two school collaboration on a water experiment through Skype; students shared their learning experience after 1 CP, 4 CTs, 1 EP, 2 ETs, 20 Chinese students, 15 Canadian students, 20 Chinese parents</td>
<td>1 CP, 4 CTs, 1 EP, 2 ETs</td>
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</tr>
<tr>
<td>September 2, 2015</td>
<td>Discussed the plan of collaboration on water science curriculum in this new semester 2 CTs, 1 ET</td>
<td>2 CTs, 1 ET</td>
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<tr>
<td>School pair 4</td>
<td>May 8, 2014</td>
<td>2 CP (1 principal of the group school), 2 CTs, 1 EP, 1 EVP</td>
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<tr>
<td></td>
<td>First Skype meeting, exchanged general information of each school, discussed possible areas of collaboration, Canadian school shared the experience of preparing kids for primary school</td>
<td>2 CP, 4 CTs, 1 EP, 1 EVP, 2 ETs</td>
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<tr>
<td>June 26, 2014</td>
<td>Introduced new participant teachers, discussed sister class collaboration and sharing student work 1 CP, 4 CTs, 1 EP, 1 EVP, 2 ETs</td>
<td>1 CP, 4 CTs, 1 EP, 1 EVP, 2 ETs</td>
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<tr>
<td>October 17, 2014</td>
<td>Discussed progresses of sister school collaboration and pen-pal activities 2 CTs, 1 EP, 1 EVP, 2 ETs</td>
<td>2 CTs, 1 EP, 1 EVP, 2 ETs</td>
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<tr>
<td>December 11, 2014</td>
<td>Students introduced to each other and then exchanged various topics, discussed pen-pal activities 2 CTs, 2 ETs, 4 Chinese students, 4 Canadian students</td>
<td>2 CTs, 2 ETs, 4 Chinese students, 4 Canadian students</td>
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<tr>
<td>Jan. 2015</td>
<td>Discussed progresses of sister school collaboration, exchanged ways of teacher development and evaluation in each school, shared thematic students events in each school 1 CP, 5 CTs, 1 EP, 1 EVP, 2 ETs</td>
<td>1 CP, 5 CTs, 1 EP, 1 EVP, 2 ETs</td>
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Appendix J

Main Themes of motivation, knowledge, practice, and identity (Ch 7)

<table>
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<tr>
<th>Codes</th>
<th>Canadian teachers (n=10)</th>
<th>Chinese teachers (n=18)</th>
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<tr>
<td>Cosm: international community</td>
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<td>Cosm: openminded</td>
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<td>Cosm: change</td>
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<tr>
<td>Know: curricular</td>
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<tr>
<td>Know: education system</td>
<td>11</td>
<td>21</td>
<td>32</td>
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<tr>
<td>Know: pedagogical</td>
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<tr>
<td>Know: Personal practical</td>
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<tr>
<td>Know: confirmed prior knowledge</td>
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<tr>
<td>Know: create dissonance</td>
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<tr>
<td>Moti: benefit students</td>
<td>25</td>
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<td>Moti: colleagues</td>
<td>11*</td>
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<td>Moti: cross boundary PL</td>
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<td>Moti: environment</td>
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<td>Moti: change:negative</td>
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<td>Moti: change:positive</td>
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<td>Prac: current</td>
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<tr>
<td>Prac: alter local curriculum</td>
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<td>Prac: pedagogical change</td>
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<td>Prac: student growth</td>
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<td>Prac: impact thinking of work</td>
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<td>Prac: impact thinking of work:limited</td>
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* 8 out of the 11 quotes are negative accounts of colleague influence
### Appendix K

#### Motivation change (Ch 7)

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<th>School Pairs</th>
<th>Informants</th>
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<th>Not changed</th>
<th>Positively changed</th>
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Note: In the "Not Changed" column, 1* denotes unchanged low motivation; 1 denotes unchanged high motivation.
Appendix L

Organizational Conditions (Ch 8)

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