Multiliteracies in the Context of a Sister Class Project: Pursuing New Possibilities in Second Language Education

by

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

Despite the persistence of traditional print-based curriculum in many contexts, the growing influence of information and communication technologies (ICTs) is gradually reshaping literacy practices and literacy education in the direction of a multiliteracies approach. The research study explored the impact of a Sister Class Project that connected two classes of Grade 7 students from Canada and Hong Kong with respect to the extent to which this Internet-mediated intercultural exchange facilitated multiliteracies pedagogy. The project investigated how English language learners (ELL) in two different cities might benefit from an online learning network that enabled them to collaborate with distant partners in carrying out academic projects, learning through multiple literacy practices, and generating knowledge together. It also explored the potentials of ICTs to support ELL students in creating identity texts, which are described as innovative works produced by students who draw on their prior experiences, cultural knowledge and linguistic resources to invest their identities in and take full control of their own learning. Consequently, the project hoped to find the extent to which a new literacy approach could create contexts of empowerment to enable these students to succeed academically.
The study demonstrated that the creation of identity texts could effectively promote ELL students’ learning motivation, collaborative learning, critical thinking, literacy and academic development, and identity formation. It opened up new opportunities for pedagogical changes and knowledge generation by students. The following pedagogical conclusions are proposed based on the findings: 1) Literacy instruction should scaffold learners’ previous knowledge to support academic learning; 2) Literacy instruction should provide learners with meaningful comprehensible input to support academic production; 3) Literacy instruction should affirm learners’ intellectual, cultural and personal identities in academic and social settings; 4) Literacy instruction should enable learners to deepen and extend their understanding of academic content and the target language across the curriculum; 5) Literacy instruction should engage learners in active, multiple literacy practices, in both L1 and L2, to ensure optimal academic progress.
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Dedication

This thesis is dedicated to …

Thompson Ng and Louisa Wong, my parents;

Irene Ng, my sister;

Herman Tsui, my husband;

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and all researchers, educators and learners of Second Language Education
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Chapter 1
Introduction

1 Thesis Introduction

1.1 Sister Class Project

Despite the persistence of traditional print-based curriculum in many contexts, the growing influence of information and communication technologies (ICTs) is gradually reshaping literacy practices and literacy education in the direction of a multiliteracies approach. Second Language Education (SLE) research (e.g. Man & Lim, 2003) has reported that global learning networks may enable teachers to understand ELL (English language learners) students’ language socialization and identity construction process, and have a high potential to promote second language (L2) learning both in and out of schools by providing them with ample opportunities for authentic L2 use. This dissertation discusses the pedagogical value and outcomes of a Sister Class Project that aims to explore the potentials of ICTs in supporting ELL students to create identity texts, which are described as innovative projects produced by students who can actively engage their prior experience, cultural knowledge and linguistic resources in order to invest their identities and take full control of their own work (Cummins & Early, 2011), which may in turn promote their learning motivation, literacy development and academic performance. ELL students may benefit from such innovative practices by redefining themselves as designers of meaning and experience in literacy learning. This case study was specifically intended to discuss how ELL students from Canada and Hong Kong could benefit from the creation of identity texts through a sister class network that enabled them to collaborate with geographically distant partners in carrying out academic projects that were connected to the language arts curriculum but entailed active literacy engagement in researching and writing about topics of mutual relevance and interests. These students were encouraged to bring in their cultural and linguistic assets to work together on a project and actively interact with others to co-construct knowledge.

Stressing that ICTs need to be effectively integrated with, rather than replacing, the existing curriculum, this study hopes to offer new directions for literacy education: 1) Literacy teachers may create positive learning contexts through ICTs to deliver academic information and promote ELL learning. 2) ELL students may extensively be exposed to rich learning resources as well as
authentic literacy input which may enable them to generate knowledge together in virtual learning space. 3) Literacy education may result in students-centered pedagogy which allows ELL students to take ownership of their learning process and invest their personal identities.

1.2 Background

Recent decades have witnessed the profound influence of globalization in many societal domains including commercial and financial sectors, manufacturing industries, medical improvements, and more importantly, technological advancements. The Information Revolution is irreversible and underway (Oseas, 2000), suggesting that everyone has to play a role on the stage of technological reform which is no longer optional in the globalized economy. The 21st century marks a significant milestone for reevaluating and remodeling English language and literacy teaching agendas (Lotherington, 2007) because technological advances initiate new instructional possibilities (Murray, 2007). When information and communication technologies are introduced in classroom contexts, instructional changes inevitably take place to reshape literacy practices and redesign teaching strategies. Language today is no longer governed by printed texts with incidental images, but is directed by multimodal texts presented on computer screens with electronic writings, and texts of all kinds with color, sound, animated images, gesture and movement (Pahl & Rowsell, 2005). The increasing power of ICTs in education is reflected not only in its application in a wide range of disciplines and subject areas, but also in its remarkable contribution to enhance the learning process by enabling students to “take more control of their own learning, access up-to-date information from a wide range of real world sources, [and] communicate efficiently with other people on a worldwide scale” (Cook & Finlayson, 1999, p.4).

It is not surprising to find that many developed countries, such as the United States, Canada, the United Kingdom, Australia, Singapore etc., have announced major initiatives for ICT implementation in education to help young generations to meet the challenges in the technology-driven era. The Clinton administration, for instance, launched a federal literacy project, Technology Literacy Challenge, in 1996 to redefine literacy practices in America (Selfe, 1999). It also funded a federal grant program, Preparing Tomorrow’s Teachers to Use Technology, to train teachers for technological classrooms and upgrade the teacher-preparation programs of most universities and colleges (Valenti, 2000). Similarly, the Hong Kong Special Administrative Region government formulated a 5-year ICT education strategy in 1998 to enhance students’
creative thinking and learning through information technologies (Chung & Yuen, 2003). The government of these developed nations/regions commonly believed that, by underlining the importance of technologies in literacy education, an ICT-literate population could be ensured in the 21st century (Cook & Finlayson, 1999).

The blossoming of computerized systems and digital devices over the past decades has dramatically changed our ways of thinking, communicating, schooling, and presenting information through new forms of media including hypertexts, multimedia, the Internet, and all other web-based resources. This technological challenge has drawn the attention of many school leaders who require teachers to do more than simply learning how to operate new machines. Many literacy teachers, however, are baffled by the ‘intrusion’ of new technologies1 into their customary teaching methods and prescribed syllabus, and are struggling with “the questions of how, when and where they should be using computers in the classroom” (Brown, 1999, p.4). Some schools are still viewing technologies as an independent, elective subject in the school curriculum. Many literacy teachers have so far been concerned about the impact of ICTs on academic outcomes, but have neglected their pedagogical influences in the learning process. In this Information Age where new technologies are closely connected with education, schools need to develop “a coherent schoolwide vision of how technology is aligned with educational goals” (Valenti, 2000, p.79). Literacy teachers need to understand the role and functions of new technologies in the classroom and learn how to make use of them to enhance literacy skills and academic development of their students. Making technologies an integral part of the school curriculum and instruction should no longer be lip service paid by educational leaders.

Literacy teaching has consistently been a challenging issue in many contexts around the world because the controversial term literacy has been defined in numerous ways without a consensus on its actual meaning. The traditional meaning of literacy simply as the ability to read and write (Ong, 1982) is highly problematic because it “rips literacy out of any social context… with little or nothing to do with human relationships. It cloaks literacy’s connection to political power, to social identity and to ideologies” (Gee, 1996, p.49). As the world becomes more technologically

1 New technologies in this thesis refer to ICT-based tools used in education including computer-assisted language learning (CALL) tools, global learning networks or websites, the Internet, videos, multimodal tools, and all other digital devices.
connected and culturally diversified in the Information Age, the concept of literacy needs a broader definition to open up the potential for a flexible, pluralistic pedagogy. The dynamic changes of social, economic, political, cultural, and technological realities in the new century have led to new demands for literacy. The concept of multiliteracies initially proposed by the New London Group (1996), which openly welcomes multiple forms of literacy associated with ICTs, and various cultural forms of literacy associated with complex multicultural societies, offers new opportunities to celebrate cultural diversity and linguistic richness in the new era. The term multiliteracies becomes increasingly significant in SLE research because it effectively extends the scope of literacy to broaden educational curriculum and enhance formal teaching methods to foster second language learners’ cognitive engagement for academic and social success (New London Group, 1996).

However, the actual value of teaching multiliteracies remains unknown. Despite the fact that significant investments have been dedicated to technological development in most schools in North America since the mid 1990s, there has been so far no consistent, large-scale research finding of any increase in test scores or academic improvement resulting from the availability of new technologies in formal instruction. SLE researchers are still working on ways to evaluate the usefulness of the integration of all possible literacy practices. Identifying the potential benefits of this integrative approach requires a better understanding of the new literacy practices available for students in the 21st century. The integration of technologies and school curriculum should draw the attention from teachers from all disciplines because this awareness is the professional responsibility of all educators to understand the new way of teaching and learning. The next millennium will celebrate the trend that technologies will make everyone “1) a teacher of data-rich English, 2) a user of networked literacy tools, and 3) a writer and a reader of digital text. If ubiquitous [technologies are] the reality, then universal humanity and global literacy are the prerequisites” (Burns, 1999, p.ix). In other words, technologies are inextricably linked with literacy education. Schools should therefore provide an engaging learning environment for students not only to equip themselves with basic computer skills and knowledge for lifelong learning, but also positively think and value their literacy practices. Only by rethinking and reshaping the literacy practices available for students can schools develop a rich, promising curriculum to meet the technological challenges in new times.
1.3 Voices Against ICTs in Education

The past few decades have witnessed a heated debate over technological impact on L2 literacy development. In order to resolve the conflicting perspectives of techno-critics and techno-advocates, it is necessary to review and explore some crucial findings in the literature to suggest implications for classroom practice. The strongest criticism of deploying ICTs in schools arises from the fact that computers have shown minimal impact on academic achievement in terms of test scores. Techno-critics (e.g. Cuban, 2001) thus question the real benefits of spending huge investments in ICT use in educational domains. In the 1980s when ICTs were introduced to literacy education, techno-critics were desperately worried that new technologies might totally replace teachers in schools by changing their traditional teaching methods, and oppress teachers and students by overwhelming them to learn new computer literacy. During that struggling period, although many teachers tended to use computers in class, they might still be technophobic at heart, meaning that they were reluctant to replace print-based instruction with ICT application. Language teachers were caught in the crossfire with rapid changes of technologies. In order to show teachers’ greater importance over computers, conservative educators argue that “[t]he computer in the head can often be a more effective aid to instruction than the computer on the desk” (Papert, 1987, p.28). Moving onto the late 1990s, techno-critics began to be anxious that the Internet may poison the minds of young children with easy access to inappropriate materials or mindless online games (Wiske, 2000). They argued that ICT use should be banned entirely from elementary education. This problem of distant learning was raised by Postman (1992) who warned that technologies would be turning students into isolated learners. The major challenge facing technological reformers in recent decade is the difficulty to provide students with formal instruction in online environments (Meskill & Krassimira, 2000). ELL learners may become discouraged and frustrated when they cannot receive face-to-face academic help or feedback from online discussions.

Computer programs may be designed to achieve different educational goals (e.g. higher test scores, improved literacy skills, good computer knowledge etc.). Teachers need to consider what instructional tools can be used to reach certain goals and improve students’ learning. The ‘right’ tool for a group of students, however, may not work pedagogically for other groups at the same time. Wood (2000) illustrates this point with an example of a computer-assisted language learning (CALL) software that supposedly teaches English vocabularies by asking learners to
match meanings to words. She argues that this software may work well for native or near-native English speakers who are normally given extensive exposure to those words in their daily lives. In contrast, without presenting the vocabularies in multiple contexts, ELL learners may find it difficult to understand new terms in a narrow sense. Since there is no one-size-fits-all instructional tool (Cummins, 2002) for all students, teachers should always be clear about their educational purposes of computers in their classes and carefully choose the appropriate software to combine good literacy instruction with ICTs.

1.4 Benefits of ICTs in Second Language Education

As the world entered into the Information Age, techno-critics have gradually become convinced of the argument that ICTs can be powerful and flexible instructional tools by providing efficient access and multiple pathways to knowledge. Technological reformers are trying to show that ICTs would be particularly beneficial for ELL learners when they are used properly to achieve well-stated educational goals such as motivating ELL students to learn L2, meeting their academic needs, encouraging them to develop creative skills with extensive online information, and making L2 learning more engaging. This section discusses the conditions that may take full advantage of ICT potentials in L2 literacy education.

1.4.1 Motivational Tools

Electronic texts can easily catch the eyes of children because ICTs can make reading materials more vivid compared to printed texts. Game-like reading formats consisting of external stimulation and rich graphics may be more effective at capturing children’s attention than textbooks (Wood, 2001). Publishing students’ works in the form of bilingual storybooks (Cummins & Schecter, 2003), posters, or creative websites may further boost students’ learning motivation, because children are generally proud of showing off their academic works of good grades. The Internet is found to be an efficient set of protocols used to interconnect individuals or groups reliably. It can enhance learners’ thinking and negotiation of meaning in the target language (Brown, 1999). For example, in a virtual learning program, in which students from six schools took part in computer-mediated discussions on public issues such as gun control, gambling and euthanasia, teachers reported that students’ motivation, interest and retention were positively influenced by their involvement in online communications (Javed, 1996).
In addition, ICTs may also encourage students to think creatively when they are well-trained to operate new technologies. Chung and Yuen (2003) in their study of 124 Grade 5 students in Hong Kong examined the effects of a 5-month Hypermedia training program in which the students were motivated to learn how to use search engines to collection information for problem solving and project creations. They suggested that ICTs can be integrated into the current computer curriculum to allow students to construct their own knowledge and improve creative and higher-order thinking skills. Computer-supported activities like reading into a microphone, writing journal responses, and creating slide shows may encourage students to express new knowledge and their own ideas (Wood, 2001). The opportunity to interact with native English speakers through online conversations may also arouse ELL students’ interests in L2 learning because they can receive authentic, resourceful input of the target language from the Internet. In short, ICTs may motivate ELL students to think and write critically and to learn from others actively by providing them with a chance to receive contextualized information to read and analyze texts, and share academic and cultural knowledge (Githiora-Updike, 2000).

1.4.2 Cognitive Tools

The human mind may be subject to cognitive constraints such as the limited capacity of human memory, the difficulty in retrieving necessary information from long-term memory, and the inefficient use of cognitive strategies to receive, manipulate, and restructure new information (Kozma, 1992). The utilization of ICTs may alleviate these limitations and foster L2 learning by making extensive information instantly available for L2 learners to expand their memory capacity, assisting them to integrate new ideas with previous knowledge, and providing them with consolidation of information (Kozma, 1992; Meunier, 1998). In a similar vein, Pea (1987) argues that the integration of information-processing systems and human thinking systems may especially enhance L2 learners’ cognitive development by reducing the required mental effort and activating their cognitive process which may in turn contribute to their development of L2 literacy. Marx and Frost (1998) investigated how videos might be used with traditional printed texts for optimal educational outcomes through relevant literacy activities. In their Management Education Research Project, participating teachers introduced a content area initially through basic readings. Then teachers instructed students to watch a selected video segment related to the discussed topic, which was followed by in-class exercises or advanced readings to solidify the impact of the video on learning objectives. Two significant results were found in the study:
1) Electronic texts with pictures on videos greatly increased learners’ motivation to read because they could control the rate of receiving information by scanning selectively over sections or slowing down their reading speed at difficult passages. 2) The use of videos facilitated learners’ cognitive development. When learners were reading the electronic texts, they constructed a mental mode of new information while at the same time updating the existing schemata to expand their long-term memory.

ELL students may further benefit cognitively from the existential realities of technologies if they are used for problem-solving, critical thinking, and understanding the meaning of the subject matter rather than for rote learning (Randhawa, 1989). Educators act as major facilitators here teaching students how to integrate (e.g. select, summarize, outline, review and report) printed and electronic information (Gambell, 1989), and how to critically select the relevant materials from multiple data sources. But locating information is only the initial step. Once students have mastered critical thinking skills to choose materials, they should learn how to evaluate and synthesize all the information they obtain into coherent ideas, and then express and present those ideas in an appropriate way (Wood, 2000). Teachers should focus ELL students’ attention not simply on learning the target language, but also on constructing a deep conceptual base for higher-order thinking skills such as summarizing, analyzing and contrasting ideas that may allow them to develop profound learning skills and improve school performance.

1.4.3 Collaborative and Empowering Tools

Techno-enthusiasts are attempting to show that ICTs can function as collaborative learning tools, rather than isolating students in computerized situations. Computer-based tasks may offer students a chance for cooperative and supportive learning (Levin & Boruta, 1983), because they usually engage students in giving verbal explanations to peers and responding to peers’ questions (Forman & Cazden, 1985). This process of interactive learning fosters “the development of logical reasoning through a process of active cognitive reorganization of known and new knowledge, content and understandings induced by cognitive conflict” (Gambell, 1989, p.279). When students work together in problem-solving tasks, they may learn how to acknowledge and coordinate different perspectives on a problem. These group activities may enhance students’ intellectual abilities, and offer them a scaffolded social environment (Sheingold, 1987) to accomplish what they might otherwise be unable to do on their own.
The practice of collaborative learning through ICTs may fulfill the explicit goal of collaborative critical inquiry (Cummins & Sayers, 1995) to promote students’ critical thinking about complex educational and social issues. The principal tenet of collaborative critical inquiry is educating all students on an equal basis. Cummins and Sayers (1995) discussed eight portraits of teachers who used online global networks to create supportive learning contexts where students could acquire multilingual and multicultural knowledge. The project focused on two global networks, *I*EARN and *Orillas*, in which students from various age groups and cultural-linguistic backgrounds were involved. The research found that, through electronic connections, the participants experienced information sharing and collaborative learning that considerably facilitated their development of academic and language skills. The researchers stressed the power of new technologies in their vision of educational reform by arguing that ICTs could function not only as a catalyst for collaborative learning, but also as empowering tools to extend students’ intellectual horizons (Cummins, 2002) and personal identities when equal access to ICTs was ensured for all students.

To resolve the educational disparities between rich and poor, or between the majority and minority students in multicultural countries, educational reform integrating ICTs into the school curriculum needs to be carried out (Foley-Vinay, 1996). Teachers therefore need to support ELL students to think critically and teach them how to utilize computers as pedagogical tools for facilitating L2 development and promoting intercultural learning. Similarly, Peterson and Bainbridge (2002) argued that collaborative inquiry may enhance teachers’ critical literacy when they are introduced to new instructional strategies that encourage them to open-ended exploration of new ideas to share teaching practices, reading materials and teaching methods.

**1.5 Focus and Purpose of the Study**

As the global language for international connections and intercultural communications, English is always undergoing innovations to fit the changing realities of the contemporary world in the Information Age (Gee, 2000). New vocabularies, collocations, spellings, and discourse conventions are common in English-dominant ICTs (Lotherington, 2000). Neologisms in English have generated new literacies by infusing digital literacies (Glistersonic, 1997) into literacy education. Studying the reconstruction of English and multiliteracies practices in literacy teaching has therefore become a prominent focus of SLE. With the aim of helping all students acquire the literacy skills necessary to be active learners and successful citizens in the rapidly changing society, educational leaders of many countries have been putting huge efforts to improve literacy
education for their students. For example, the government of Hong Kong has set up an official website entitled *Hong Kong Education City* (http://www.hkedcity.net/) to provide educators, students and parents with updated information about educational policies and plans of the Education and Manpower Bureau of Hong Kong. In addition, most schools in Hong Kong have been given sufficient resources to install practical language programs in school computers, coordinate multimedia lessons for high school students, promote e-learning among students of all levels (HK Education City, 2004), and make effective use of web information as learning resources. The educational outcomes of the implementation of these policies in terms of students’ literacy development, learning attitudes and academic achievement are still under observation. Therefore, it is important for SLE researchers to investigate the practicality of new instructional practices relevant for L2 literacy education in Hong Kong.

Recent studies (e.g. Han & Cheng, 2011) have revealed the challenging situations of ELL students in Canada. Watt and Roessingh (2001) reported that 74% of immigrant students dropped out of high school education in 1989 in Alberta. Derwing, DeCorby, Ichikawa, and Jamieson (1999) showed that 54% of ELLs completed high school compared to a 70% of all other students in Alberta. In order to ensure that all students meet the minimum standard of English literacy skills, the government of Ontario launched a province-wide standardized literacy test, OSSLT (Ontario Secondary School Literacy Test), in 2000. Passing the literacy test is a strict requirement for receiving a high school diploma. The fact that approximately 50% of ELL students failed the provincial literacy test in 2003 (Ministry of Education, 2004) posed an additional challenge for literacy educators. The high failing and deferral rates of ELL students on the OSSLT (Education Quality and Accountability Office, 2003, 2007) showed that many of these students were struggling to obtain the basic English literacy skills and to succeed in schooling. The test outcomes also highlighted the urgent need to support these students in catching up to grade expectations in English literacy. In this regard, this study focused on exploring the extent to which ICTs might support the literacy development and identity investment of these ELL students to help them achieve academic success in Canada and elsewhere. To apply a new literacy approach relevant to the socio-culturally, economically, educationally and technologically dynamic world in the 21st century, this thesis discusses the pedagogical implications of a *Sister Class Project* carried out in Hong Kong and Canada which placed strong emphasis on technological advancement and cultural appreciation.
This *Sister Class Project* was a computer-supported project whose goal was to encourage ELL students from diverse backgrounds to bring their cultural and linguistic knowledge to literacy learning and to collaborate with their peers online to produce academic works. The study was an attempt to bridge the gap between the traditional way of teaching reading and writing in schools and the complicated set of new literacy practices most students were developing and using in out-of-school contexts. It primarily aimed to investigate how ELL learners may benefit academically and intellectually from a *multiliteracies approach*, and how the implementation of such an approach may provide new insights for *Second Language Education*. Its ultimate goal was to suggest new ways to look at *literacy* as the ability to use reading and writing to communicate with others, interpret human relationships, and make personal meanings (Voss, 1996).

### 1.6 Research Questions

The *Sister Class Project* was intended to discuss the effectiveness of the *multiliteracies approach* in literacy education by addressing two major research questions focusing on the *learning process* and *learning outcomes* of the ELL students from the perspectives of both the participating teachers and students:

**Learning Process:**

1) How did the ELL students and teachers in Hong Kong and Canada perceive the online learning environment with respect to its collaborative effects on students’ engagement in knowledge building and with respect to the integration of ICTs and the school curriculum? What scaffolding support did the ELL students receive in the online learning space?

**Learning Outcomes:**

2) How did the *Sister Class Project* promote learning motivation, critical thinking skills, student empowerment, and identity formation of the ELL students? How did the *multiliteracies approach* benefit both the ELL students and the teachers in school and out-of-school contexts?
To draw a more comprehensive picture of literacy practices, the investigation proposed to 1) document innovative literacy practices that teachers may implement to strengthen the L2 literacy skills and deepen the academic understanding of ELL students, 2) examine the educational impact of the integration of traditional teaching tools with new literacy practices on ELL students’ literacy learning, and 3) discuss the role of ICTs in language classrooms and the effective ways of adopting computer-mediated tools to provide reinforcement for ELL students’ literacy practices.

1.7 Thesis Overview

To critically investigate these issues, I designed this research study based on a theory-research-practice paradigm (Cummins, 2000) by 1) discussing the theoretical principles of the Multiliteracies Framework (Cope & Kalantzis 2000) and the Academic Expertise Framework (Cummins, 2001), 2) analyzing the research findings of the Sister Class Project which connected ELL students from Canada and Hong Kong for cultural and academic exchange, and finally 3) suggesting practical pedagogical implications of multiliteracies for implementing proper educational practices in school and out-of-school contexts.

The thesis presents and discusses the study in seven chapters. Chapter 1 has introduced the broader issue of the changing nature of literacy in an era of rapid technological innovation and the extent to which ICTs may be useful in enhancing the learning of ELL students. Rather than denying the value of traditional literacy practices, ICTs may function as supporting learning tools when they are effectively employed in literacy classrooms. Chapter 2 examines the central construct of literacy and describes the transformation from literacy to multiliteracies to show the relevance of the later construct to second language pedagogy. Chapter 3 presents the fundamental, theoretical principles of the Multiliteracies Framework (Cope & Kalantzis 2000) and the Academic Expertise Framework (Cummins, 2001) to further discuss the increasing applicability and the impact of multiliteracies in Second Language Education in general and in ESL contexts in particular. It also introduces the important concept Identity Text (Cummins & Early 2011) which refers to students’ learning products that reflect their emerging identities through creative design, language choice, literacy practice and scaffolding of learning experience. Chapter 4 describes the Sister Class Project, including its overall objectives, research partnership, research sites, participating schools’ profiles, participating teachers’
profiles, participating students’ profiles, recruitment of participants, the role of the researcher, and the project timeline. Chapter 5 explicates the purposes, significance and functions of the case study method adopted in the *Sister Class Project*. It also discusses the data collection procedure and tools of the project including students’ literacy logs, class observations, videotaping of class activities, semi-structured focus group and individual interviews, online discussions, students’ academic writings and identity texts, and participants’ written reflections. Chapter 6 presents the project findings with respect to six major areas that emerged from the coding of the following themes: a) Collaborative learning among ELL students from the two sister classes; b) Integration of ICTs with the existing school curriculum; c) Learning motivation and learning attitudes of the ELL students; d) Critical thinking development of the ELL students; e) Student empowerment in both the classroom and the online learning environment; and f) Identity formation of the ELL students in planning, designing and producing *identity texts*. It extends the discussion of the ELL students’ learning process and outcomes by examining the role of the participating students, the teachers, and the parents. Chapter 7 concludes the thesis by summarizing the research findings and discussing their implications and significance for language and literacy development in educational contexts.
Chapter 2
Literature Review

2 Definition of Literacy

The rapid pace of globalization and technological advancement has dramatically modified our communicative patterns and pedagogical approaches adopted in many school systems. Changes in language use in the past decades include our reading habits, writing practices, ways of expressions, means of receiving information, and learning literacy skills. These changes are essential and inevitable responses to the changing realities in the Information Age, despite the disapproval or opposition of some parents and educators who insist on placing their children/students in a traditional, prescribed, disciplined classroom to ensure they can succeed academically and meet the requirements of the standard curriculum. Like it or not, these changes redefine literacy from a multiliteracies perspective (Leu, Kinzer, Coiro & Cammack, 2004), open up new possibilities for communication and information delivery, and transform literacy education from a vertical, top-down curriculum to a broad-minded, transformative pedagogy.

Although the study of ICT influence in literacy education is not a completely new research direction, it remains an emerging field of study because many previous research projects discussing the strategies of implementing ICTs in classroom contexts tend to be small scale and rarely generalizable (Murray, 2007). The research literature is still lacking a thorough, comprehensive approach to the study of appropriate literacy practices in schools, the effects of ICTs on language teaching and language learning, and the proper integration of ICTs into school curriculum. This chapter discusses the power of the multiliteracies approach in schools, the wider community and the globalized world, and summarizes the meaning of new literacy forms that bolster the educational contexts in which technological impact and cultural-linguistic diversity are the norm. It also explains why ICTs need to be integrated into literacy teaching requiring educators to re-think “learning as a multimodal process” (Jewitt & Kress, 2003, p.17) and open up spaces for multiliteracies pedagogy. Proposing the relevancy of the multiliteracies pedagogy in culturally and linguistically diverse communities, this chapter is intended to introduce an important concept identity text (Cummins & Early, 2011) to recognize the unique features of the work produced by students in multicultural learning contexts.
Defining literacy in the 21st century is complicated because the new era is flooded with new types of messages and images from multiple sources. There have been many different ways of interpreting literacy which comprises unique components when it is used in different contexts and for different purposes, suggesting that literacy tends to be used in a broader way to indicate a level of competence and thinking within a specific context (Voss, 1996). No single form of literacy can be completely separated from other literacies or from the complex network of socio-economic realities and cultural practices in the surrounding environment. This thesis proposes to use the term literacy to represent not only personal competency to express in words through reading and writing, but also the way of seeing, knowing, understanding, interacting, and responding to problems (Voss, 1996). It refers to the ability and willingness to engage with language to look at the world, communicate with others, and acquire and construct meaning in all aspects of daily living. Literacy is therefore always multidimensional and multimodal.

2.1 Traditional Literacy

Traditionally, literacy refers to the competency of understanding printed texts (Pahl & Rowsell, 2005), and employing the tools of communication available in and outside school contexts to facilitate comprehension of academic topics, exchange information, and interact with others in the local community and from other countries. Literacy has long been regarded as the competent level of reading and writing that allows people to function adequately in society, meaning that a literate person can use his/her reading and writing skills to find and keep a job, and understand functional materials in daily life such as newspapers, bus schedules, advertising fliers, road signs, instruction manuals etc. (Voss, 1996). Such ability to meet societal demands is known as functional literacy referring to “a set of cognitive skills that enables individuals to function in social and employment situations in their society” (Blackledge, 2000, p.18). Functional literacy is embedded with such everyday activities as shopping, watching television, and understanding driving signals. In other words, literacy is required not only in a formal school setting, but also at home, on the street, and may take different forms in various parts of the world. The classroom is not the only place where literacy can be acquired. Students can apply their life experiences in different out-of-school activities such as playing games, watching movies, using electronic devices, and drawing pictures. Literacy should hence be viewed from a broader perspective as it is interwoven with many different forms of practices and expressions of meaning.
2.2 Critical Literacy

Although it is beyond the scope of this thesis to discuss all literacy types and forms embedded in the new definition of literacy, certain forms of literacy are essential to teaching and learning in the contemporary globalized context. One of these forms, critical literacy, is defined as the “analytic habits of thinking, reading, writing, speaking, or discussing which go beneath surface impressions, traditional myths, mere opinions, and routine clichés; understanding the social contexts and consequences of any subject matter; discovering the deep meaning of any event, text, technique, process, object, statement, image, or situation; applying that meaning to your own context” (Shor, 1992, p.32-33). Critical literacy articulates the power relations in schools and in society and suggests “the potential of written language to be a tool for people to analyze the division of power and resources in their society and transform discriminatory structures” (Blackledge, 2000, p.18). Apart from training language learners to choose, locate and analyze the information or knowledge they obtain from multiple resources, the teaching of critical literacy also aims to guide learners to view literacy as a social process in relation to interactions with texts as well as power structures in society. Street (1993) argues that critical literacy should be used to describe the way people use literacy and relate it to power structures within society.

It has been argued (e.g. Lankshear, 1997; Luke, 2000a) that metalanguage is priority knowledge for critical literacy development. Metalanguage refers to the “understanding of how knowledge, ideas and information ‘bits’ are structured in different media and genres, and how these structures affect people’s readings and uses of that information” (Luke 2000b, p.72). Since critical literacy basically involves the awareness that all literacy practices are socially constructed (Lankshear, Synder, & Green, 2000), the teaching of metalanguage therefore needs to focus on “the theoretical link between the descriptions of the visual and verbal elements of texts and how they make meanings, and their relationship to the parameters of the social contexts in which they function” (Unsworth, 2001, p.16). When teaching critical literacy, “the reader and the context dictate the terms of how a text is read and understood” (Pahl & Rowsell, 2005, p.79), suggesting that the reader should have control of using literacy to interpret the text, and greater control of their own meanings, thinking, discourses and ideologies. We therefore should not see literacy as a neutral skill, but as a socially situated practice that can be articulated and applied at work, at home, and in out-of-school contexts (Pahl & Rowsell, 2005).
The first step in teaching critical literacy is to direct language learners to search for appropriate, useful materials in a particular learning or social context. Lotherington (2000) argues that educators should ensure all students can properly select and evaluate information provided by ICTs, critically mediate fragmented chaos of hypertext in cyberspace, and incorporate traditional literacy and multiliteracies into knowledge construction. Cummins and Sayers (1995) also show great concern with promoting language learners’ critical literacy skills as a precondition for developing functional literacy: “A focus on critical inquiry, in a collaborative and supportive context, will encourage students to engage in learning in ways that will promote future productive engagement in their societies…. [and] will position students well for full participation in the economic and social realities of their global community” (ibid, p.116).

The next step in teaching critical literacy is to guide language learners to critically think about the deep, underlying meaning of any written text or learning material they may obtain from the society. Based on Catherine Wallace’s discussion about critical reading, Lankshear (1994) relates critical literacy with critical language awareness indicating the ability to respond to particular texts and the awareness of what reading actually means. Wallace stresses the crucial role of literacy educators in assisting language learners to view texts and the reading of texts as problematic, understand the political-ideological character of literacy as a social phenomenon, and become critical and assertive when interacting with written texts. Literacy instructors may lead students to carefully consider the following questions: “1) What reading practices are characteristic of particular social groups? 2) How are reading materials produced in a particular society? How do texts such as newspapers, advertisements, documentaries, or other public information materials come to us in the form they do? Who produces them, and who are their target readers or audiences? 3) What influences the process of interpreting texts in a specific context? What factors tend to influence the publication process? What is the perspective of the author and what kind of message does the text give us?” (Lankshear & McLaren, 1993, p.3-4). Only when students learn how to critically analyze the true meaning of texts and different voices of different social groups can they fully benefit in schools and in society. Enhancing students’ development of critical language awareness may further reinforce their sense of identity in the process of identity negotiation.
2.3 Multiliteracies

Conceptions of literacy that associate the construct only with printed texts are problematic in the Information Age because they do not take recently emerging forms of literacy into account. Many classroom teachers and school leaders tend to recognize and criticize the traditional meaning of print literacy as inadequate and non-representative measures of the visual, verbal and oral literacy forms students have already acquired and possessed (Emery, 1996). In light of the accelerated shift toward global connectedness and computer-mediated communications, the traditional definition of literacy has been challenged by a group of researchers, including Street (1984, 1999), Gee (1996), Barton and Hamilton (1998), and the New London Group (1996), who proposed the multiliteracies approach advocating that the need to learn an expanded form of literacy is a wake-up call in literacy education.

Far beyond regular coding and decoding skills, the scope of literacy should be extended to include all symbolic or meaning-making systems to better comprehend and interpret the present world (Street, 1984). Literacy should encompass not only language, but also social practices in which reading, writing and speaking are embedded (Gee, 1996; Street, 1999). New social development leads to the growth of new literacy forms, new media, new knowledge, new hypertexts, new ways of delivering and exchanging information, new pedagogies, and new instructional and learning approaches. “In recent times, whole new areas of expression have emerged, in relation to such domains as computing, broadcasting, commercial advertising, and popular music” (Crystal, 1997:382). Multiliteracies should therefore include multiple representational forms of meaning such as computer literacy (e.g. Luke, 2002; Selber, 2004), cultural literacy (e.g. Freire and Macedo, 1987; Giroux, 1989; Hirsch, 1987), digital literacy (e.g. Gilster, 1997), information literacy (Bawden, 2001; Kellner, 1995, 2004), media/multimedia literacy (e.g. Baran, 2002; Bourdieu, 1998; Kellner, 1998, 2008; Warschauer, 2001) and so on. Multiliteracies, which are constituted by multiple forms of literacy, are regarded as “meaning-making systems that can be used functionally (to get things done), communicatively (to relate to others), reflectively (to think about critically), enjoyably (to do for pleasure), flexibly (to apply in new situations)” (Voss, 1996:3).
The contemporary world is represented in different modes and forms which may lead to different effects for language teaching and learning. A mode refers to “a regularized organized set of resources for meaning-making, including image, gaze, gesture, movement, music, speech and sound-effect. Modes are broadly understood to be the effect of the work of culture in shaping material into resources for representation” (Jewitt & Kress, 2003, p.1). Language is generally viewed as a symbolic representation characterized by informational simulations in which the “self is decentred, dispersed, and multiplied in continuous instability” (Poster, 1996, p.6), suggesting that all signs carry meaning and information, and hence literacy is a “mode of information” (ibid). The process of meaning-making always requires an understanding and interpretation of different modes which may be integrated with textual, visual, auditory, spatial and kinetic modes. This evolution of multimodal expressions entails the need to accept and value diversity by recognizing the world as a multiplicity of races, cultures, personal experience, ways of thinking and ways of using languages.

Literacy education is indisputably embracing the new waves of ICTs which are no longer accessible only to certain groups of computer professionals, multimedia experts, or school-based technicians. It is not surprising to see many young children nowadays are exposed to a great variety of meaning-making modes such as computer games, smart phone apps, digital music, text messages, digital graphics and so forth. It is therefore necessary to rethink a new form of literacy which expands our view of reading, writing, speaking, listening and meaning-making. The term multiliteracies arose at the right time to refer to all forms of communication other than purely linguistic mode. It incorporates visual (e.g. pictures), auditory (e.g. music), gestural (e.g. dance), and multimodal (e.g. web links) meanings (New London Group, 1996). It allows learners to “negotiate a complex interplay multiple sign systems (e.g. video clips, music, sound effects, icons, virtually rendered paint strokes, print-based texts or documents), multiple modalities (e.g. linguistic, auditory, visual, artistic), and recursive communicative and cognitive processes (e.g. real time and virtual conversations, cutting/pasting text, manipulating graphics, importing photographs)” (Hill, 2005, p.1). Multiliteracies therefore appeared to be an appropriate concept in literacy education in the new century to overcome the limitations of traditional literacy practices by negotiating the multiple cultural-linguistic differences and multimodal forms of literacy in order to equip students with the skills necessary to be active learners and citizens in rapidly changing societies.
Globalization is playing an increasingly influential role in the transformation of literacy. How we use literacy in one local context may be very different from another local context and an international context. Bianco (2000) proposes that language change needs to be understood in the context of globalization which has brought with it a plethora of discourses, language, and cultural forms that increasing numbers of students nowadays are capable of and motivated to be savvy with. We therefore need to adopt a global approach to understand how one’s cultural background relates to literacy practice (Pahl & Rowsell, 2005). Teachers need to connect their literacy teaching with students’ cultural knowledge and practice by scaffolding and building on their home culture and prior experience within the school in which they can embed their identities by incorporating both local and global literacies (ibid). Pahl and Rowsell (2005, p.80) present a very clear picture of the mixture of local and global literacies which are simultaneously changing our pattern and use of literacy in the globalized world. These literacies take place in local contexts but rely on global networks:

“1) Literacy for establishing and maintain relations (e.g. email, texting);
2) Literacy for accessing or displaying information (e.g. PowerPoint, Internet searches, SGML or XML coding);
3) Literacy for pleasure and/or self-expression (e.g. web pages, videogames);
4) Literacy for skills development (e.g. combing media in written assignment)”

These local and global literacies depend on each other and manifest in daily speech, writing, and activities that cut across contexts, cultures, and communities. The constant interactions between local and global literacies contribute to multiliteracies which broaden not only the modes of human communications, but also the contexts in which these communications take place.

The New London Group (1996, 2000) introduced the term multiliteracies by arguing that the definition of literacy needs to be expanded from the traditional language-based and print-based approach by taking into account the multiplicity of communication channels and the increasing cultural and linguistic diversity in the globalized world into account. The notion of literacy needs to be reconsidered and reconceptualized as plurality of literacies by shifting the focus to equitable social and cultural participation as well as “the burgeoning variety of text forms associated with information and multimedia technologies. This includes understanding the competent control of representational forms that are becoming increasingly significant in the overall communications environment…. [and] the understanding of literacy and literacy teaching
and learning to include a multiplicity of discourses” (New London, Group, 1996:61). If schools aim to foster the development of these multiple literacies in their students, they should have a good understanding of the bases of their diversity, that includes not only the affordances of ICTs but also “the increasing prominence of images in both electronic and conventional formats, the differentiation of the distinctive literacy demands of different school curriculum areas, and the distinguishing among forms of reproductive and critically reflective literacy practices” (Unsworth, 2001, p.8). In order to help students become active participants in emerging multiliteracies contexts, teachers need to adopt effective strategies to enable students to understand “how the resources of language, image and digital rhetorics can be deployed independently and interactively to construct different kinds of meanings. This means developing knowledge about linguistic, visual and digital meaning-making systems” (ibid). Meskill (2005) in her research project Triadic scaffolds (teachers, learners and computers), which examined the communicative dynamics of a language teacher exposing her ELL students to multiliteracies on ICT-supported tools, found that these learners were better poised to claim their identities than they were not equipped with computers. “As active participants, they are positioned to construct their contexts of being and learning, a process that benefits from inclusion as opposed to exclusion” (Messkill, 2005, p.56). On the part of teachers, a study examining the use of technology in high schools in Prince Edward Island, Canada, found that e-leadership can be promoted to better support literacy teaching through appropriate technological tools and activities such as Smartboards, Prezi, Teacher blogs, and other educational apps (Preston, Moffatt,Wiebe, McAuley, Campbell & Gabriel, 2015).

The New London Group further suggested that the pedagogical use of multiliteracies may enable students to function more effectively in the community and future work by fostering the “critical engagement necessary for them to design their social futures and achieve success through fulfilling employment” (New London Group, 1996, p.60). The long-term goals of learning multiliteracies can be achieved both in the school contexts and in the wider community when “the goal of the teacher is to expand the number of choices available to students. An understanding of the many literacies and their uses offers opportunities for students to become as proficient in as many literacies and learning styles as possible – not only those with which the students find an affinity” (Tyner, 1998, p.64). The multiliteracies approach can specifically help ELL students fulfill educational and social success by encouraging them to utilize multiple forms
of literacy to act as active learners and dedicated members of society. Literacy teachers may adopt such strategies as arousing ELL students’ curiosity towards the target language, teaching linguistic rules from observation of actual usage of the language, increasing ELL students’ metalinguistic awareness of the language system, and encouraging these students to creatively negotiate meaning in academic and social contexts (Canagarajah, 2001). Although the nature of ELL classroom practices may not be realistically decontextualized from such a complexity of influences, pedagogical frameworks for enhancing multiliteracies development and optimizing literacy learning need to be clearly identified.

2.4 Positive Findings of Sister Class Projects in the Literature

This multiliteracies approach can be exceptionally beneficial to students when connections with the local learning community and the globalized world are made (Thwaites, 2003). ELL students may benefit from this approach when they are provided with opportunities to interact with a multitude of complex individual and social factors within the classroom, the school, the community, and the broader social and multicultural contexts. Many schools are thus promoting sister school partnerships to increase the awareness of this method among teachers and students, and to bring a global dimension to education through authentic use of ICTs within and across the school contexts. The sister school program connecting schools from Spain and Australia (Prieto, 2013) exhibited prominent educational benefits: 1) Students’ learning motivation was increased as they were provided with real audience for their work from the local and international contexts. 2) Students’ literacy skills and cultural awareness were enhanced through ICT use and online communications with foreign peers. 3) Teachers were given a chance to share and celebrate their professional development, teaching approaches and expertise with educators from other countries. 4) Sister schools were able to internationalize the outlook of the school community by showing understanding and appreciation of students’ cultures, languages and backgrounds.

Kourtis-Kazoullis and Skourtou (2004) conducted an Internet-based Sister Class Project, DiaLogos, which was carried out over two years between Grade 4-6 classes in Canada and Greece. The project primarily aimed to create an environment of “dialogic inquiry” where two different languages (i.e. English and Greek) could be learned. Through the sister class network, students in Greece were learning English and students in Canada (with the Greek background) were learning Greek. The project integrated new technologies, through the Internet platform and
ICT tools, with the tradition orientation of the language classrooms that have been established in Canada and Greece. The students participating in *DiaLogos* were asked to find information and learning materials for an academic topic about ancient Greece and ancient Rhodes. This activity enabled the students to develop critical literacy as they were expected to analyze whether the image of Greece described in the textbook was similar or different from their own image of Greece. When the students were looking for historical and archeological fact about their Greek culture in an electronic magazine, they were surprised to find some incorrect information and they eventually decided to write a letter to the editor protesting against the representation of their history in a way that was not acceptable to them. In this context of critical inquiry, the students learned that others’ descriptions of their own culture might be different from their own interpretations. They also learned that they could take control of their own learning and act on social realities. “In the case of *DiaLogos*, the students were able to take action on their own, without the teacher’s guidance, when the topic dealt with their own identities and when they felt very strongly about the topic” (Kourtis-Kazoullis & Skourtou, 2004, p.17). Based on the success of the *Sister Class Project* in creating a productive learning environment that actively engaged students from two countries, assuring contextual support for ELL students, and promoting activation of these students’ prior experience, Skourtou (2002) concluded that building sister class networks in an ICT-supported environment can be a promising way of making learning more meaningful for students, and opening up new possibilities for teachers to combine effective instructional approaches.

### 2.5 Identity Texts

The term *identity text* is described as “products of students’ creative work or performance carried out within the pedagogical space orchestrated by the classroom teacher .... The identity text then holds a mirror up to students in which their identities are reflected back in a positive light” (Cummins, Bismilla, Chow, Cohen, Giampapa, Leoni, Sandhu & Sastri, 2005, p.40). Identity texts can be an effective learning tool in multilingual classrooms if teachers construct an open learning space for ELL students to actively engage their prior experience, cultural values and linguistic capitals in order to invest their identities and take full control of their own works. When ELL students share their identity texts with multiple audiences including their peers, teachers, parents, school leaders, sister classes, community members and so forth, they are likely
to receive positive feedback, encouragement and affirmation of personal self and values reflected in their work (Cummins & Early, 2001). Previous research (e.g. Nguyen & Kellogg, 2005; Vyas, 2004) has reported that global learning networks may enable teachers to understand ELL students’ language socialization and identity construction process (Koga, 2006), and may have a high potential to promote L2 learning both in and out of schools by providing them with ample opportunities for real L2 use (Man & Lim, 2003).

Through multiple case studies exploring the pedagogical values of dual language identity texts created by ELL students (e.g. Cummins, Bismilla, Chow, Cohen, Giampapa, Leoni, Sandhu & Sastri, 2005; Early & Yeung, 2009), Cummins and Early (2011, p.4) concluded that identity texts can exert a positive impact on students’ self-image and educational quality of their learning by:

1) Encouraging students to connect new information and skills learned from multiple forms to their background knowledge
2) Enabling students to produce more accomplished literacy work in the school/target language without losing/ignoring their home language
3) Increasing their awareness of the specialized language of school subject areas
4) Affirming students’ personal identities as intelligent, imaginative and linguistically talented
5) Increasing their awareness of the relationships between their home language (L1) and the school language (L2).

More importantly, identity texts can serve as a powerful pedagogical tool to reduce the social gap between the majority and minority students in schools. ELL students, especially those newcomers who lack competence in the target language, may be marginalized based on their racial, religious, cultural, socioeconomic, and linguistic differences. Offering an opportunity for these ELL students to design and produce identity texts by scaffolding their learning experience, expanding their imagination, applying their multimodal skills, showcasing their artistic and talents and intelligence may significantly increase learning motivation and promote learning equity for these students from a socially-marginalized background. “Creation of identity texts also helps students to develop knowledge of particular subject matter and engages them actively in literacy and cultural production or performance, at a cognitively appropriate level, at a time when their English language academic skills may still be far below the expectations for particular age or grade levels” (Cummins & Early, 2011, p.4).
To further explore the pedagogical values of such a powerful learning tool, this thesis is intended to discuss how ELL learners may benefit from the construction of identity texts through a sister class network supporting the collaborative creation of literature and art to explore issues of social relevance (Cummins, Brown & Sayers, 2007). This *Sister Class Project* offered an online learning space in which students from two distant classes were guided to “investigate design cultures, examine use contexts, identify institutional forces, and critique popular representations… through a grounded understanding of persuasion, deliberation, reflection, and social action” (Paul & Spinuzzi, 2006, p.226-7). With the support of multimodal learning tools and resources, it aimed to explore the educational benefits of multiliteracies practices as an effective scaffold for the participating students’ academic engagement, literacy development, and identity investment in schools and the wider society with broaden curriculum and rich resources that may enable them to read, write, express, think and perform more confidently and successfully than in a traditional, print-based, strictly-controlled classroom. It was hoped that ELL students in this study would be able to demonstrate their literacy skills in a dynamic learning context by bringing in their cultural and linguistic knowledge to produce identity texts, and actively interacting with others to co-construct knowledge and expertise (Warschauer, 1997).
Chapter 3
Theoretical Frameworks

3 Theoretical Frameworks of the Sister Class Project

This research project was developed based on the orientations and principles of the Multiliteracies Framework (New London Group, 2000) and the Academic Expertise Framework (Cummins, 2001) which jointly advocate the significance of educators’ affirmation and appreciation of all students’ native language and culture to promote their literacy learning, academic engagement, educational achievement, and identity construction. The Multiliteracies Framework (New London Group, 2000), which highlights the growing impact of cultural-linguistic diversity and technological power in literacy education, is a good starting point to help us cross the boundaries among different cultural groups and investigate the pedagogical role of ICTs in the new century.

3.1 The Multiliteracies Framework

In their ground-breaking work of the Social Literacy Project, Cope and Kalantzis (1988) regarded social literacy as the “ability to understand a complex and interdependent social world, and skills of active, confident social participation” (Cope & Kalantzis, 1988, p.37), as well as the skills and knowledge for addressing multicultural teaching and learning. In their later work of the Multiliteracies Framework developed with the New London Group, Cope and Kalantzis (2000) realized that the original notion of social literacy is no longer applicable in the modern world of rapid social changes. They therefore expanded the concept of literacy to multiliteracies by suggesting and urging the need to develop appropriate literacy skills among all language learners and citizens in response to the socio-cultural and technological demand of the contemporary world which is becoming increasingly multicultural and multimodal. The Multiliteracies Framework puts its central focus on the Design process, arguing that any semiotic activity should involve three elements: Available Designs, Designing, and the Redesigned. Available designs refer to the existing resources for meaning-meaning, including the grammars and conventions of a semiotic system. Designing is the process of transforming available designs to new meaningful resources. The redesigned refers to the rebuilding and renegotiation of identity
that is reproduced by designing process. Literacy educators need to act as active designers of meanings and social futures by making use of available materials to reconstruct new meanings.

3.1.1 Multiplicity of Information and Communications Technologies

The Multiliteracies Framework (New London Group, 2000) highlights two principal concerns of literacy education. The first argument engages with the multiplicity of communication channels and media. It relates to multimodal ways of meaning-making, suggesting that different patterns of meaning may be found in graphic images, animations, global networks, audio recordings, video captioning, web-based devices and so forth. ICTs have created multiliteracies that are required by learners of all ages if they are struggling for academic success (Lotherington, 2007). The fast diffusion of ICTs has stimulated the demand for multiliteracies and is still reshaping the way we use and teach languages, communicate with others, and express ideas and thoughts. For instance, the e-terminologies in English have become extensively used to represent all computerized or Internet-related terms in most ICT domains. The prefix e- is attached to an existing English noun to create an ICT-related term. It is a typical example of literacy innovation with respect to new word formations in ICT practice. Bodomo and Lee (2001) developed a framework called Technology-conditioned approach to Language Change and Use (TelCU) to indicate the causal relationship between the emergence of ICTs and the creation of new literacy forms of English by listing the meanings and functions of some commonly used e-terminologies such as e-course, e-books, e-journals, e-library, e-publishing, e-quiz, e-text and so forth (Appendix 1). Other new literacy forms in cyberspace are those creative words and expressions used in computer-mediated communications (CMC) such as emails and online chat rooms (e.g. Facebook Massager, WhatsApp, WeChat). For example, the use of acronyms which involves the abbreviation of English phrases, and the innovative use of emoticons which employs related icons to convey the tone, mood or emotion of the writer (Bodomo & Lee, 2001) are found increasingly popular in CMC (Appendix 2). These new word formations, involving the creativity and self-identification of users in ICT contexts, are characteristic of the paradigm of multiliteracies in the digital age.

ICTs are perceived as increasingly relevant, powerful tools in literacy education. The positive evidence of online learning is well documented in SLE research literature. For example, Man and Lim’s study of Internet use among literacy teachers and ELL students in Hong Kong (2003)
found that ICTs have a high potential to promote L2 learning both in and out of schools, and may provide ELL students with sufficient opportunities for authentic L2 use in various social domains. Similarly, Warschauer (1997) argued that CMC motivates and encourages L2 learners to interact actively with others and construct new knowledge. Luke (2003) agreed that online teaching offers ELL learners a rich learning context and real learning input for interdisciplinary thinking and learning. In this regard, literacy pedagogy needs to account for “the burgeoning variety of text forms associated with information and multimedia technologies” (Cope & Kalantzis, 2000, p. 9).

3.1.2 Increasing Salience of Cultural and Linguistic Diversity

The first principle of the Multiliteracies Framework is closely linked to the second, which acknowledges the social realities of growing cultural and linguistic diversity. “The proliferation of communications channels and media supports and extends cultural and subcultural diversity” (Cope & Kalantzis, 2000, p.9). Literate behaviors in meaning-making vary among cultures. Understanding different cultural systems is essential for intercultural communications because it allows us to more accurately interpret the intentions and messages of speakers from various backgrounds. Recent research findings in Second Language Education (e.g. Blackledge, 2000; Newman, 2002) have shown the variety of literacy practices among different ethnic groups, implying the need to recognize cultural and linguistic diversity and to view the world as a multiplicity of learning experience and critical ways of thinking. Wills (2000) argued that ELL instructors may teach literacy effectively if they develop a collaborative, culturally sensitive learning environment that encourages meaningful, engaged learning for ELL students who are likely to be excluded in the mainstream classroom. In other words, teachers need to understand the significant impact of culture on these students’ self-esteem, learning motivation, literacy achievement, classroom behavior, and identity development. Literacy education has to transform from traditional mere literacy pedagogy, that centers on a single cultural form of language, to multiliteracies pedagogy in which all cultures and languages are considered as dynamic representational resources (New London Group, 1996). In short, the concept of multiliteracies is becoming influential in SLE literature, acknowledging the significance of both the multimedia literacy forms and cultural literacy forms (Cope & Kalantzis, 2000) which are the major changing realities in the 21st century.
3.1.3 Orientations of Multiliteracies Pedagogy

Advocating the importance of expanding students’ cultural horizons and respecting their cultural experience, the New London Group (2000) proposed a multiliteracies pedagogy to offer educators pedagogical options for teaching different forms of literacy relevant to the changing realities and the pervasiveness of diversity. Different from the examination-orientated pedagogy which aims to increase students’ scores in academic standardized tests, multiliteracies pedagogy is an attempt to improve students’ learning behavior and academic achievement by stimulating their cognitive and intellectual growth, critical thinking, and positive identity formation.

Multiliteracies may function as powerful classroom resources and social assets (Cope & Kalantzis, 1995) when properly employed and promoted. To improve the quality of literacy teaching, schools need to develop a multiliteracies pedagogy (New London Group, 2000) rather than sticking with the one-size-fits-all curriculum (Cummins, 2002). Multiliteracies pedagogy views literacy knowledge as “integrated, multimodal and interdisciplinary” (Luke, 2000a, p.435). The four major components of multiliteracies pedagogy serve as useful instructional guidelines for educators to promote student’s literacy development (New London Group, 2000):

1) **Situated practice**: teachers should provide students with ample opportunities to activate their prior knowledge and be immersed in meaningful experience.

2) **Overt instruction**: teachers need to explicitly teach concepts and theories which explain underlying processes.

3) **Critical framing**: teachers should teach students how to critically interpret concepts and ideas in relation to their social and cultural relevance.

4) **Transformed practice**: teachers need to help students transfer knowledge from the school contexts to real life situations by putting the theories they have learned in class into practice.

3.1.3.1 Situated Practice

Situated practice means that literacy learning should be based on pedagogies of immersion and experiential learning. It refers to “a student’s immersion into meaningful practices within a community of learners who are capable of playing multiple and different roles based on their backgrounds and experiences” (Pahl & Rowsell, 2005, p.82). The community should include experts who are able to master certain practices in some depth. These experts may serve as mentors to guide others in the learning process by activating the learners’ previous and current
experiences, with in-school and out-of-school practices, as an integral part of their learning experiences (Cazden, Cope, Fairclough & Gee, 1996). Teachers therefore need to provide students with a learning space of immersion and the utilization of Available Designs drawn from their experiences. Effective learning can only take place when learners are motivated to learn and believe that they can function well with what they have learned. In this regard, situated practice should consider the social-cultural needs and identities of all learners (ibid).

3.1.3.2 Overt Instruction

Overt instruction refers to the explicit teaching of linguistic rules and conventions. It involves the instruction of explicit metalanguages, which are languages of reflective generalization describing the form, content and function of the discourses of practice (Cazden, Cope, Fairclough & Gee, 1996), to explain and interpret the Design elements of different modes of meaning, and hence give students greater depth of the meaning of the academic content and allow them to describe the patterns in Available Designs and the Designing process. Overt instruction is “a teacher’s intervention into the meaning-making process by scaffolding learning activities. Students gain explicit information to organize and guide their learning. The goal of overt instruction is to develop a student’s conscious awareness and control over what is being learned” (Pahl & Rowsell, 2005, p.82). In other words, overt instruction involves systemic, analytic and conscious understanding of what the learner has accomplished and what the learner is learning in the domain being practiced.

3.1.3.3 Critical Framing

Critical framing focuses on the practice of critique and contextualization in formal instruction. It refers to the interpretation of the social and cultural contexts of particular Designs of meaning. Students need to stand back from what they are learning in the classroom and view the academic topic critically in relation to its socio-cultural context. Critical framing mainly aims to help students understand the contexts and purposes of the meaning to give them greater breath of the meaning in a particular situation by asking such questions as: How does the meaning fit into the existential world? Whose purposes and preferences does the meaning best serve, and whose interests are ignored by the same meaning? What is the major function of the Design? What cultural approach is adopted in the specific context? By practicing critical framing, students may know what the Design is intended to mean, function and serve in certain contexts. In the process
of critical framing, “a student frames his or her teaching and learning around such embodied understandings as culture, politics, ideologies, values and beliefs. Teachers thereby denaturalize and “make strange” what they have been taught and learned. Through critical framing, students can constructively critique what they have learned and account for its cultural, political and socio-economic implications” (Pahl & Rowsell, 2005, p.82).

3.1.3.4 Transformed Practice

Transformed practice aims to help students put theories into practice by transferring the understanding of meaning from one context or cultural site to another. Students may be able to reproduce the meaning and apply it in other contexts by using their creativity in the process of transformation. Through transformed practice, “a teacher can develop new ways in which students can demonstrate how they can design and carry out new practices embedded in their goals and values. Transformed practice allows students to apply and revise what they have learned – and do so critically and meaningfully” (Cope & Kalantzis, 2000, p.35). Only in this way can students demonstrate their understanding acquired through overt instruction and critical framing that help them apply and revise what they have learned simultaneously.

To sum up, in formal literacy teaching, knowledge is best constructed through immersion in “hand-on” experiences (situated practice), coupled with explicit concepts and theories which explain underlying processes (overt instruction), through locating knowledge in its relevant context and reflection on its purposes (critical framing), and through transferring knowledge gained in one context to another (transformed practice) (New London Group, 2000).

3.1.3.5 Limitations of the Multiliteracies Framework

Despite the fact that the New London Group’s Multiliteracies Framework offers inspirational insights of how new literacy instruction can facilitate students develop literacy skills more powerfully and effectively than traditional literacy approaches, and that its relevance and significance are becoming recognized in academia, the actual application of multiliteracies pedagogy is still minimal in the educational practice of many developed countries, such as the USA and the UK, which seem to pull backwards toward a traditional, or transmission instructional approach. Cummins (2001) critically points out two gaps in the ability of the Multiliteracies Framework to provide a coherent account of research data. First, the
Multiliteracies Framework combines learning perspectives (what the students do) and teaching perspectives (what the teachers do) into the same set of constructs. Cummins (ibid) suggests that it would be more useful to separate these two perspectives in order to provide more specificity with respect to instructional practices. For example, “the roles of prior knowledge and students’ L1 are not explicitly specified in the New London Group framework, despite their relevance for scaffolding instruction for culturally and linguistically diverse (CLD) students in the early stages of learning the school language” (Cummins, 2001, p.14). Second, the Multiliteracies Framework does not explicitly connect instruction to identity negotiation and societal power relations which are obviously the important constructs in student’s literacy development. The relevance of these constructs is implied but not fully elaborated in the framework. To address this lack, this thesis draws on Cummins’ Academic Expertise Framework, which thoroughly articulates these two constructs, to discuss how identity investment and societal power relations are closely tied to students’ literacy engagement and overall academic achievement.

3.2 The Academic Expertise Framework

The Academic Expertise Framework (Cummins, 2001) highlights the influence of “macro” relations of power between the dominant group and minority groups as well as “micro” relations of power between teachers and students in students’ academic success and failure. The critical analysis of macro and micro power relations provides a different lens through which culturally and linguistically diverse students’ learning processes can be observed and assessed, and has actually brought important implications to all educators and the school system. For the most part, the hierarchical power of the dominant group in the wider society has been reflected, replicated, and accepted in the micro interactions of the school system. The perspective of ELL students, who are often regarded and treated as low achievers in school, can be seen as the reflection of the dominant view of the wider society. The Collaborative Empowerment Framework (Figure 1) proposes that the general academic failure of ELL students may be rooted in the long-established historical patterns of coercive power relations between dominant and subordinated groups which may be reflected in school contexts, rather than being caused by their own cultural or linguistic background. Analyzing how power relations play a vital role in culturally and linguistically diverse ELL students’ identity negotiation process allows teachers to better understand the actual causes of academic underachievement among these students and provides teachers with a clear direction to challenge the existing patterns of power relations.
3.2.1 Interactions within the Learning Community: Patterns of Power Relations

3.2.1.1 Macro Relations of Power

The zone of interactions within the learning community in Figure 1 (i.e. the interpersonal space) explains the importance of ELL students’ identity negotiation in academic success from the lens of societal power relations and the lens of school power relations. At the macro level, the power relations between the dominant group and minorities groups are often found to be imbalanced and inequitable. The political authorities of many English-dominant multicultural countries have misunderstood the true meaning and implications of bilingual education, which has eventually resulted in the misguided implementation of English-only curricula and movements. Such a monolingual policy imposed on non-English groups immediately exposes the power relations between the dominant and subordinated groups in the wider society. This “xenophobic discourse” (Cummins, 2000, p.3) may be broadcast into schools, and ELL children may then be caught in the “crossfire” of learning.
3.2.1.2 Micro Relations of Power

At the micro level, Cummins (2000) revealed how societal power relations are reflected in classrooms. Micro interactions between teachers and students may either “reinforce coercive relations of power or promote collaborative relations of power” (ibid, p.44). Coercive relations of power refer to the exercise or manipulation of power by the dominant, more powerful group over the subordinated, minority groups. This type of relations reflects an assimilationist, discriminatory orientation, and leads to subtractive bilingualism in schools. By contrast, collaborative relations of power refer to interpersonal or intergroup mutual support/cooperation.

“Participants in [this] relationship are empowered\(^2\) through their collaboration such that each is more affirmed in her or his identity and has a greater sense of efficacy to create change in his or her life or social situation …… Power is created with others rather than being imposed on or exercised over others” (Cummins, 1996, p.16). This type of relations reflects an intercultural, affirmative, transformative orientation, and leads to additive bilingualism in schools.

The Academic Expertise Framework considers micro teacher-student interactions the major determinant of students’ academic achievement. The interactions between communities, educators and students create an interpersonal space within which knowledge is acquired and identity formation is negotiated. “Power is created and shared within this interpersonal space where minds and identities meet” (Cummins, 2001, p.13). Societal power structures may influence the culture of school which is “expressed in the educational structures implemented in the school and in the ways educators define their roles with respect to culturally diverse students and communities” (Cummins, 1996, p.163). These students may be oppressed similarly to the socio-political disempowerment of their cultural group in the community. On the other hand, these students can be enriched in an academic context of empowerment in the same way that their cultural group is respected in society. Cummins (2001) is perspicacious here in presenting a convincing argument of how macro interactions between the dominant group and subordinated groups in society may reflect micro interactions between teachers and students in schools, urging

\(^2\) The term ‘empowerment’ entails both sociological and psychological dimensions. Generating empowerment in school contexts involves not only showing respect and value to culturally diverse students’ first language, previous experience and identity, but also challenging explicitly the devaluation of identity that these students and their cultural groups experience in the society as a whole. (Cummins, 1996).
all political leaders and educators to make genuine commitment to challenge coercive power structures to help ELL students develop positive identities and promote educational success.

3.2.2 Maximum Cognitive Engagement and Maximum Identity Investment

The Academic Expertise Framework views teacher-student relationships through two lenses. The first focus is on cognitive engagement or knowledge generation of students aiming to foster students’ learning through effective instruction. The second focus is on students’ identity negotiation process referring to the ways and options students view themselves through their interactions with teachers.

3.2.2.1 The Lens of Cognitive Engagement

The Academic Expertise Framework argues that within the interpersonal space of teachers-student interactions, ELL students’ cognitive engagement must be maximized if they are to progress academically. It suggests that initial instruction through these students’ L1 may lower their cognitive barriers and may help them better understand the language and academic content taught in the classroom. Literacy teachers’ activation of ELL students’ prior knowledge and learning experiences may greatly facilitate their language learning, maximize their cognitive engagement, and enable them to function both intellectually and linguistically. Consequently, literacy teachers can validate ELL students’ culturally backgrounds and affirm their cultural knowledge, allowing them to benefit from the lens of identity negotiation.

3.2.2.2 The Lens of Identity Negotiation

The Academic Expertise Framework also argues that within the interpersonal space, teachers should respect all students’ cultural, linguistic and personal characteristics in order to maximize their identity investment in the learning process and to arouse their interest to learn in class. To invest their identities in acquiring the target language and to be actively involved in the majority culture, ELL students need to experience positive interactions with their teachers, classmates, peers, and members of the majority culture. In this regard, literacy teachers play a crucial role in creating supportive learning contexts for ELL students by respecting and affirming their cultural backgrounds and personal experiences in order to encourage them to fully participate in school.
To sum up, in order to provide positive interactions for students to enhance their academic learning, the Academic Expertise Framework suggests that literacy teachers must affirm all ELL students’ cultural and linguistic knowledge and personal value to maximize their identity investment in the learning process. In culturally and linguistically diversified school settings, literacy teachers need to show respect to ELL students’ L1 and cultural values so as to motivate them to develop identities in academic learning and actively participate in the classroom. Equally important is the activation of students’ prior knowledge and learning experiences that may allow them to maximize their cognitive engagement to help them better understand the instructional content and function both linguistically and academically in schools (Cummins, 2001).

Hornberger (2000) used the term “biliteracy” to indicate that oral and written communication commonly takes place in two or more languages, and this is ideally also the case in most classrooms where ELL students contribute a mosaic of cultures and languages. To enhance ELL students’ understanding of the taught subject, teachers need to draw on ELL students’ L1 and encourage them to activate their cultural and linguistic backgrounds. Teachers should support ELL students to make use of their linguistic resources they inherently possess allowing them to have a better chance for cultural sharing and language expression. By welcoming the linguistic and cultural resources ELL students bring to school, they may feel they are well respected and acknowledged what they can contribute to their learning within a multicultural learning context.

3.2.3 Three Focus Areas

The Academic Expertise Framework also highlights three focus areas (Figure 1) for instruction aiming at developing ELL students’ academic language proficiency. Instruction should put an explicit focus on meaning, language, and extensive use of both oral and written form of the target language in order help culturally diverse students succeed academically. These three focus areas are in fact realized in the central sphere of the framework advocating maximum cognitive engagement and maximum identity negotiation. A reciprocal relationship between these two major purposes is implied in the framework: “The ways in which identities are negotiated will affect the long-term outcomes of the teaching/learning process and, by the same token, the effectiveness of instruction in enabling students to generate knowledge will affect the academic and personal identities that students develop” (Cummins, 2001, p.254).
3.2.3.1 Focus on Meaning

Focus on meaning implies that teachers need to provide students with sufficient comprehensible input in the target language when teaching L2 in formal classrooms. To make learning input comprehensible, teachers need to activate students’ cognitive schemata by helping students relate textual or instructional meanings to their own learning experiences. For example, teachers may ask students to brainstorm relevant ideas or experiences related to the academic topic being discussed in class. The framework also suggests that positive teacher-student interactions may promote critical literacy among students by encouraging students to share their previous knowledge within a collaborative process of critical inquiry (Cummins & Sayers, 1995), which is a key learning process to make literature and complex social issues comprehensible. Teachers need to help students critically analyze text content and message by guiding them to evaluate the validity of different arguments or views of different authors. The more critically literate the students become, the greater the power they may generate to define their own identities and educational realities.

3.2.3.2 Focus on Language

Focus on language means that teachers need to pay attention to explicit modeling of academic language forms and demonstration of the rules of language use in content instruction to allow students to fully understand the perspective of the writer and the underlying message of the text. For instance, teachers may use explicit examples, guided questions and/or discussions to deepen students’ understanding of the topic or learning materials, and internalize the language forms or linguistic rules they have learned from formal instruction. Consequently, the focus on formal language features may be integrated with critical inquiry, enabling students to develop critical language awareness to explore the relationship between language and power and hence strengthen their sense of identity.

3.2.3.3 Focus on Use

Focus on use suggests that students should be taught how to generate new knowledge by applying the knowledge they have received from formal instruction in their social lives. Teachers may show students how the meaning of a particular text may be applied in multiple contexts. For example, teachers may create social contexts either within or outside the classroom (e.g. through
role plays or community activities) to enable students to apply their learned concepts or knowledge in real-life situations, to express their inner thoughts and views, and to relate formal instruction with experiential learning. This practice of active language use may greatly facilitate linguistic growth, cognitive development and identity formation among students, and make students aware of their goals, plans, aspirations and expectations in literacy learning.

To sum up, literacy instruction must incorporate a focus on meaning to provide comprehensible input for students; it must demystify how academic language works and develop critical language awareness among students; it must provide ample opportunities for students to fully express themselves and to develop their identities (Cummins, 2001). Both of the Multiliteracies Framework and the Academic Expertise Framework advocate active participation of teachers and students in literacy education. ELL students should be encouraged to view themselves as active designers of text meanings and social futures to promote educational and social success. These frameworks hope to transform ELL students from being passive learners in the traditional teacher-controlled pedagogy to be active learners in an innovative student-focused model.

3.3 Pedagogical Orientations

The transformation of teaching and learning largely depends on the pedagogical orientations teachers choose to deliver their instruction: traditional, social constructivist, or transformative, or a combination of them (Skourtou, Kourtis-Kazoullis & Cummins, 2006). How educators define their roles is important in equalizing power relations in schools and promoting optimal pedagogy for all students because educator role definitions express their expectations, assumptions and goals that they bring to teach students from diverse backgrounds (Cummins, 2009). Educators usually have different options in defining their roles and negotiating identities with students that will consequently determine students’ educational outcomes. If educators define their roles in terms of promoting equal learning opportunities in the classroom, then their interactions with ELL students are likely to embody a “transformative orientation” (Cummins, 2000) that may challenge coercive relations of power in schools. In order to reverse the discriminatory patterns and eliminate inequities in class, teachers need to be involved in an educational reform to redefine their roles with respect to ELL students’ L1 and culture and to generate a collaborative learning environment within which ELL students can be supported socially and educationally.
3.3.1 Transmission Pedagogy

*Transmission* pedagogy, which is represented in the narrow inner circle in the nested diagram (Figure 2), primarily aims to transmit information and knowledge required by the curriculum directly to students. It encompasses a strictly controlled, teacher-directed curriculum focusing on highly structured drills and rote memorizations. Teachers initiate and fully control the interactions with students. The instructional content basically focuses on the surface features (e.g. phonics, vocabulary, spelling, grammatical rule) of a language which are decomposed into different parts and are taught in isolation. For instance, an explicit instruction on phonetic knowledge is viewed as a prerequisite for reading development. Instruction tends to narrowly focus on the content of particular lessons or the mandatory syllabus rather than integrated into a broader process of collaborative inquiry (Cummins, 2005). Activation of prior knowledge in *transmission* pedagogy is defined as reviewing the content and knowledge taught in previous lessons. ELL students are therefore expected to memorize each lesson content in order to succeed in a literacy course. “Exclusive reliance on transmission pedagogy is likely to entail
promotions of memorization rather than learning for deep understanding, passive rather than active learning and minimal activation of students’ prior knowledge” (Cummins, 2001, p.10). The goal of this pedagogy is to indoctrinate ELL students both instructionally and socially to build a powerful culture by training them to be “good citizens” who should comply with the expectations of the societal power structures in the dominant culture (Cummins, 2000). Cummins criticized such a teaching approach as not only ineffective, but also as perpetuating coercive power structures because it makes these collaborative relations totally invisible and reinforces discrimination against ELL students. Predominant or excessive reliance on transmission pedagogy fails to address some of the fundamental causes of ELL students’ underachievement which are entrenched in the operation of power relations both in schools and in the society (Cummins, 2001).

3.3.2 Social Constructivist Pedagogy

Social constructivist pedagogy, which is represented in the middle circle (Figure 2), recognizes the relevance of transmitting information and knowledge but broadens its focus to include students’ development of higher-order thinking skills based on the co-construction of knowledge between teachers and students in the classroom. This pedagogy stresses the importance of experiential learning, collaborative inquiry and knowledge building by integrating factual knowledge with conceptual frameworks, activating students’ previous experience, and enabling students to actively control their learning process (Cummins, 2001). It is comprised of a whole-language approach emphasizing the wholeness of a language. It insists that language can only be learned as a whole through meaningful communications and literature (Foley-Vinay, 1996). This pedagogy highlights the role of collaborative inquiry within which knowledge can be generated by teachers and students together. Although social constructivist pedagogy indirectly addresses some societal power relations and identity formation by viewing students as capable of managing higher-order thinking skills and actively applying their pre-existing knowledge and cultural experiences, it usually “focuses narrowly on the teaching-learning relationship and fails to articulate a coherent vision of the broader social implications of instruction” (Cummins, 2000, p.260). In this case, social constructivist pedagogy has put effort to increase students’ self-esteem, but does little to challenge unequal power relations and social realities.
3.3.3 From Transmission to Transformative Pedagogy

Sharing the common instructional orientation with *social constructivist* pedagogy, *transformative* pedagogy, which is represented in the outer circle (Figure 2), further expands the focus by placing a strong emphasis on social realities that relate to students’ experience, enabling students to better understand how knowledge intersects with power. *Transformative* pedagogy incorporates collaborative critical inquiry into the curriculum allowing students to analyze broader social issues to “discuss ways in which social realities might be transformed through various forms of democratic participation and social action” (Cummins & Sayers, 1995, p.153). Through collaborative discussions, ELL students can learn how to act on or react to realities that might be transformed through various forms of social action, and finally develop critical thinking skills. The primary goal of *transformative* pedagogy is to help students build social awareness of democratic ideals and social justice and offer them the critical literacy tools necessary for full participation both in schools and in the society (Cummins, 2001). Extensive research studies (e.g. Cummins & Sayers, 1995; Skourtou, Kourtis-Kazoullis & Cummins, 2006) have shown that intercultural learning and critical inquiry suggested by *transformative pedagogy* are greatly effective in promoting higher-order cognitive and academic skills. Being aware of the diversities of the global community and working collaboratively with teachers to transform social realities in positive ways, ELL students in transformative classrooms will become more educationally engaged and successful than those in *transmission* or *social constructivist* classrooms.

Although *transformative* pedagogy appears to be an appropriate instructional model promoting *cognitive engagement* and *identity negotiation* among ELL students by means of the specification of critical literacy, critical language awareness, and acting on social realities that the *Academic Expertise Framework* is advocating for, it does not mean that *transmission* and *social constructive* approaches are of no pedagogical value. The features of *transmission* pedagogy are relevant to all kinds of learning as explicit instruction, and structured guidelines can be useful for formal schooling and effective teaching. *Transmission* pedagogy is challenging only if it predominates in instruction and devalues the focus of other instructional orientations. In a similar vein, *transformative* pedagogy is not necessarily in an opposing position to either transmission of curriculum content or the co-construction of knowledge among teachers and students. In fact, it expands both *transmission* and *social constructivist* approaches aiming to pursue a broader pedagogical goal and educational vision (Cummins, 2001).
3.3.4 Transformative Multiliteracies Pedagogy

Building on the construct of multiliteracies, the critical analysis of how societal power relations affect the schooling of ELL students, and the nested relationship among transmission, social constructivist, and transformative orientations to teaching and learning, Cummins (2001) introduced transformative multiliteracies pedagogy to demonstrate its relevance to the increasingly multicultural, multilingual, multimodal school community and the global world. Transformative multiliteracies pedagogy is different from other pedagogical frameworks in proposing identity investment, which has not received much attention in SLE research literature, as a core component of learning. The negotiation of identities is therefore the major determinant of students’ cognitive engagement in the learning process (Cummins, 2001). This pedagogy suggests that societal power relations can be expressed in the classroom through the process of identity negotiation. Educational administrators, principals and teachers can choose either to reinforce coercive relations of power or promote collaborative relations of power within the education system. Educators’ choices are reflected in pedagogy adopted. Teachers have the choices to determine how they connect the curriculum to the ELL students’ prior knowledge, and how they interact with students and convey their messages in the classroom. Transformative multiliteracies pedagogy proposes the following principles highlighting the significance of identity investment in promoting literacy engagement and providing educators with clear guidelines of employing multiple literacy practices for effective learning (Cummins, 2001, p.21):

1) Transformative Multiliteracies Pedagogy constructs an image of the child as intelligent, imaginative, and linguistically talented; individual differences in these traits do not diminish the potential of each child to shine in specific ways.

2) Transformative Multiliteracies Pedagogy acknowledges and builds on the cultural and linguistic capital (prior knowledge) of students and communities.

3) Transformative Multiliteracies Pedagogy aims explicitly to promote cognitive engagement and identity investment on the part of students.

4) Transformative Multiliteracies Pedagogy enables students to construct knowledge, create literature and art, and act on social realities through dialogue and critical inquiry.

5) Transformative Multiliteracies Pedagogy employs a variety of technological tools to support students’ construction of knowledge, literature, and art and their presentation of this intellectual work to multiple audiences through the creation of identity texts.
3.3.5 Implications of Transformative Multiliteracies Pedagogy

The educational significance and value of transformative multiliteracies pedagogy should not be overlooked because it represents the core component of effective instruction and educational reform process that is genuinely concerned about reducing discriminatory experience and improving academic achievement among marginalized ELL students. In short, transformative multiliteracies pedagogy is an attempt to “1) explicitly challenge the operation of coercive power relations both in schools and in society, 2) reflect a multiliteracies perspective by incorporating the multimodal and multilingual literacy practices in the globalized learning environments of the 21st century, and 3) suggest that teacher agency is intrinsic to the success of any educational reform as teachers and educators have the choice and responsibility to create the learning context of empowerment, which can be fueled by literacy engagement and identity investment, in their classrooms” (Cummins, 2001, p.24). To achieve these pedagogical goals, transformative multiliteracies pedagogy offers some inspirational suggestions to individual educators to provide culturally diverse ELL students with effective schooling (Cummins, 1997). For example, teachers may use the native language and cultural experiences of ELL students as part of the instructional background or strategies to motivate them to learn and participate more actively in class. Teachers need to adopt a student-centered approach and carry out collaborative inquiry activities such as peer tutoring tasks, cooperative class activities, group discussions and partner readings to create a mutually supportive learning environment for these students. Teachers should also show respect to ELL students’ home culture and encourage involvement of parents who may act as important supporters of their children’s education. In addition, school leaders need to make the education of ELL students a priority. They should celebrate cultural diversity and reinforce ELL students’ L1 skills to prepare for their L2 learning. School principals must carefully monitor the curricular and implement school policies to make sure that ELL students are not placed in a disadvantaged or disempowered learning situation.

In summary, school administrators and teachers should explore the possibility of providing ELL students with a positive learning environment through transformative multiliteracies pedagogy. Educators should devote themselves to be involved in this timely instructional approach by engaging the totality of ELL students’ previous language experiences and cognitive abilities in the learning process, and by creating educational contexts of empowerment where students’ identities can be invested and affirmed. The incredible outcome of this pedagogy is the fruitful
production of educationally and personally empowered students. Within transformative multiliteracies orientation, oppressive societal power relations may be reversed, and power tends to be shared among every community member in the educational enterprise. Understanding the meaning and practicality of transformative multiliteracies pedagogy is therefore a crucial step of a powerful educational reform from which all ELL students can considerably benefit.

3.3.6 Multiliteracies Pedagogy

Many literacy educators or teachers may find it challenging to employ transformative multiliteracies pedagogy to ensure absolute academic and social equality in all learning environments. In addition, no single theoretical framework has so far explained the full range of changes and potentials of ICTs in literacy education, though much research has contributed to the multiliteracies perspective with different visions discussing the functions and relevancy of critical literacy (e.g. Luke, 1997; Muspratt, Luke & Freebody, 1998), computer literacy (e.g. Luke, 1993; Selber, 2004, Williams, 2003), media literacy (e.g. Baran, 2010; Kahn & Kellner, 2005), and multiliteracies (e.g. Anstey & Bull, 2006; New London Group, 2000). Multiliteracies pedagogy is therefore appropriate to address the needs and expectations of all students, teachers, parents and community members in literacy education. This thesis proposes an integration of all relevant literacy paradigms discussed above and the theoretical principals of the Multiliteracies Framework (New London Group, 2000) and the Academic Expertise Framework (Cummins, 2001) which insightfully highlight the power of ICTs, experiential learning, and linguistic and cultural assets to expand students’ learning opportunities and identification process. The former uses the construct multiliteracies to capture ongoing changes in the Information Age in two dimensions central to literacy: “1) the multiple modalities of communication in a world where many new communication technologies have appeared, and 2) the growing diversity of culture and language within an increasingly global community.” (Leu, Kinzer, Coiro & Cammack, 2004, p.13). The latter goes beyond Vygotsky’s social constructivist approach (1978), which emphasizes the importance of learner’s prior experiences in collaborative scaffolding and construction of knowledge, by “encouraging students to develop a critical awareness of how language and power intersect and to use language to explore and act on social realities” (Cummins, 2005, p.114). Both of these two frameworks advocate positive collaborative relations of power in education.
Previous research studies (e.g. Warschauer, Knobel & Stone, 2004) showed that transmission-oriented pedagogies, which were generally superficial and passive, failed to build on ELL learners’ pre-existing cultural and linguistic knowledge, and consequently constricted them to construct knowledge and remove the achievement gap in an isolated, non-interactive, teacher-controlled classroom where they may be suppressed by the coercive power relations with teachers and majority students. Although recent research (e.g. Exley, 2007; Hill, 2005; Kaur, Ganapathy, & Sidhu, 2012; Ng, 2006) has proved the far-reaching potentials of multiliteracies practices, we are still seeing the hesitations of some educators to detach themselves from traditional teaching approaches. In North America, for instance, technology is well-developed and available in the school system. However, for minority and low-income students, “computers are typically used for low-level drill and practice routines (traditional pedagogy) rather than for creative and challenging collaborative work (constructivist pedagogy). Projects rooted in a transformative pedagogy orientation are still extremely rare, despite their greater potential to promote cognitive engagement, knowledge generation, and identity investment” (Cummins, 2005, p.123). Even though some progressive educators are advocating for the implementation of transformative pedagogy, these approaches in many contexts or school systems are still outside the mainstream (Cummins, Early, Leoni & Stille, 2011). In other words, those socially marginalized ELL students are denied the right to receive support from such pedagogy, leaving them no option but remaining at the bottom line of the standardized evaluation spectrum and being stereotyped as ‘low achievers’ or ‘leftover’ both in schools and in the larger society. Rather than challenging transmission-oriented pedagogy, this thesis suggests that traditional literacy practices and the multiliteracies approach may complement each other to help L2 learners promote literacy skills and learn functionally in schools. By combining theory with practice, it hopes to inspire and motivate literacy teachers to become active designers of their students’ literacy practices both in the classroom and in the community.
Chapter 4
The Sister Class Project

4 Project Description

This chapter describes the Sister Class Project including its objectives, research partnership, research context, participants, and project plans. This Sister Class Project was one of the case studies of a cross-Canada research project entitled From literacy to multiliteracies: Designing learning environments for knowledge generation within the new economy, and henceforth referred to as the Multiliteracies Project, (Early, Cummins & Willinsky, 2002). The overall purposes of the Multiliteracies Project were to articulate the choices that most school systems are facing in the rapidly evolving world with respect to what forms of literacy to teach and what pedagogical options are most appropriate for teaching multiple forms of literacy in order to find effective ways to improve the academic literacy attainment that most school systems focus on and to extend traditional print-based literacy to multiliteracies that are increasingly relevant to the Information Age. This Sister Class Project particularly focused on exploring the impact of the multiliteracies approach through Internet-mediated intercultural exchange among distant partners. It attempted to explore the extent to which the multiliteracies approach could create contexts of empowerment to enable ELL students to succeed academically.

4.1 Project Overview

The Sister Class Project was designed to explore the potential value of multiliteracies by linking up a school in Toronto and a school in Hong Kong in a collaborative learning environment through a project website to enhance cultural and academic exchange as well as new knowledge generation among distant learners. It connected a Language Arts class of Grade 7 students from Toronto with an English Language class of Secondary 1 students (of the same age) from Hong Kong. The students from the two schools were divided into small groups according to their topic preferences and created a cultural newsletter (i.e. an identity text project) together. The teachers and the students came up with a list of socio-cultural topics that matched with their curriculum goals and the interests of all students. The topics (Appendix 3) covered a wide range of interests including celebrating cultural festivals, travelling around the world, protecting our
nature/environment, sharing our pop culture, playing sports and games, and so forth. Each group co-authored a cultural newsletter (in an electronic and a printed version) highlighting the important issues of the selected topic. To show appreciation to the students’ native language and culture, the students were asked to produce a bilingual/multilingual newsletter by translating the identity texts into their L1. Realizing the positive effects of parental involvement in children’s literacy education, the students were strongly encouraged to ask their parents to help, proofread or comment on their translations. The students finally presented their newsletters in a *Literacy Fair* at their school library in which all parents, teachers, students, the principal and community members were welcomed to attend. The final products of the students were published on the project website and displayed in the schools’ showcases to demonstrate good models of collaborative projects and allow everyone in the community to share and celebrate their academic accomplishments.

### 4.2 Research Partnership

The York Region District School Board and the Peel Board of Education were the major partners of the Toronto team of the *Multiliteracies Project*. The Hong Kong school was also part of the team to offer a sister class connection with the Toronto school. The Toronto school and teachers were identified by the YRDSB by means of an internal solicitation process. All of the participating schools and teachers went through this process voluntarily. A number of meetings were held in 2003 to discuss the project plans and to clarify the project goals and procedures. During our first meeting, a Toronto teacher approached me expressing her interest in applying new technologies and new literacy forms in her Grade 7 Language Arts class and exchanging ideas with overseas participants in an interactive learning environment. The principal and the teacher of this Toronto school gave their consent to participate in the *Sister Class Project* and invited me to the school to check on the available computer resources and equipment in order to set up a connection with their sister class partner.

I personally invited the Hong Kong school to participate in the study. I initially contacted the school principal requesting her formal permission to involve the school in the project. Then I sent a letter to an English teacher (who was referred by the principal) for her written informed consent, followed by the consent forms for the students and their parents. In situations where the parents or guardians have limited English proficiency, translation of the English consent letters
into their first language was made available. The school principal, the English teacher, the students and their parents replied with strong interest and enthusiasm to take part in the *Sister Class Project*. The teacher agreed to work closely with me during my visit to Hong Kong in the academic year of 2014-15, and to communicate regularly with the Toronto class through the project website during the data collection process. Both teachers had similar educational goals of motivating their ELL students to learn English by utilizing authentic L2 input available in the online learning context.

### 4.3 Research Sites and School Profiles

The two research sites, a Toronto school of the YRDSB and a Hong Kong school of the Catholic School Board, provided the *Sister Class Project* with plentiful opportunities to explore the potentials of multiliteracies practices because both schools were advocating the incorporation of new technologies with the school curriculum. For instance, the schools put great effort to install new desktops and laptops in the multi-media labs and in all classrooms, used high-speed wireless Internet cable service, set up school and class websites, participated in technology-assisted educational workshops, invested in practical computer software, and bought new equipment or digital devices such as digital camcorders, digital cameras, and tablets that their students could borrow to work on their academic projects. Sharing the common objective of employing ICTs and multiliteracies to make L2 learning more interactive and promising, the schools were therefore carefully matched in terms of their curriculum goals, course syllabi, and the grade level of the participating students.

The Toronto school was officially opened in 1997. It was one of the largest schools of the YRDSB and consisted of about 800 students from Grade 1 to Grade 8. The overall educational goals of the school were to prepare and support its students to achieve both in character development and academic growth, and to value students’ cultural differences and linguistic backgrounds. The socio-economic backgrounds of the students varied from government-subsidized families who were receiving housing welfare to middle class families who owned private properties in the school area. Most parents of the middle class families were working in professional fields, whereas some parents of the working class families were single parents who had to financially support the entire family. There was a high degree of cultural and linguistic diversity in the school. The majority of the students were South-East Asians (including Chinese,
Taiwanese, Korean, and Malaysians who constituted the highest population), Anglophones, Indians, and Iranians. Most of the students came from immigrant families and hence had an ELL background. The school principal and most teachers found that their students normally spoke their L1 outside the classroom (e.g. in the hallway, cafeteria, or playground) and had limited exposure to English learning materials at home. Some of these ELL students, including those who were born in Canada, had competent English speaking skills, but might experience problems in meeting the minimum writing standard required by the curriculum. As a result, this Toronto school expected that this project might help those ELL students improve their L2 literacy skills by investing in potential computer-mediated instructional tools and adopting innovative literacy practices in the classroom. The school leaders were paying equal attention to ELL students’ identity development by affirming every student’s native language and culture because they believed that L1 reinforcement might foster L2 learning in constructive ways.

The Hong Kong school was a well-established Catholic girls’ school founded in 1953. Its class size (about 40-45 students) was almost double of that of the Toronto School (about 22-25 students). Most students in this school were born in Hong Kong and were native Cantonese speakers. This school was an EMI school, meaning that English was used as the medium of instruction for all subjects, except for Chinese Language, Chinese Literature, and Chinese History. The socio-economic backgrounds of the students in this school varied from working-class families to middle-class families. Most of the parents were working full time and tended to hire a Pilipino housemaid to take care of their children while they were at work. Families were generally small, usually composed of 3-4 family members (parents and 1-2 child/children). Most students spoke English as their L2 and their exposure to English input outside the school was limited; their English level was similar to that of the ELL immigrant students in the Toronto class. The students were able to meet the minimum English standard required by the school, but there was still a lot of work for the English teachers to do in order to improve the L2 skills of these ELL students.

### 4.4 Teacher Profiles

The participating teacher of the Toronto School was a highly professional, experienced teacher who has been teaching in the school since it was open. Her competent bilingual skills (English and Chinese), strong teaching background, and deep cultural knowledge enabled her to work
effectively with her ELL students and evaluate their identity text projects. The participating teacher of the Hong Kong school (and now the principal of the school) was also a passionate educator who has shown strong enthusiasm and consistent support in this research study. She has been serving in the school for more than 20 years. Both teachers were putting their best effort to fit this project into their syllabus, helping their students understand the project goals and produce identity texts, and facilitating group discussions in the online context. The teachers’ own motivation to learn the meaning and value of multiliteracies, devotion of additional time in this study, careful supervision of their student’s learning progress, positive interactions with the students and their parents, and great contribution of innovative ideas and practical suggestions have made this project more successful and rewarding.

4.5 Student Profiles

All of the participating students came from an ELL background. The Toronto group consisted of twenty-two students. Eight of them were born in Canada, but they spoke a different language other than English as their L1. Four students grew up with two languages (English and Cantonese) as their parents wanted them to develop competent bilingual skills in the Canadian society. In spite of their fair to proficient English oral skills, these students were still experiencing some problems with their written English. Ten students were recent immigrants who had resided in Canada for less than two years and were still struggling with the new language, the new school, the new environment, and the new culture. It is hence not surprising to find that these students were less active or less involved in the classroom because they did not have sufficient language skills to communicate with others in the school. They tended not to express themselves or signal understanding in class. As a result, they could hardly get a good grade in their assignments and exams, and were therefore at risk academically.

The Hong Kong group comprised forty-three students. Forty-one of them were born in Hong Kong and two were immigrants from the southern part of the Mainland China. All of them were able to speak native Cantonese, though the two immigrants spoke both Mandarin and Cantonese as their L1. They regarded English as their L2 because they were required to learn this target language and used it as the medium of communication in most lessons, recess and lunch time period in this EMI school. Placing a strong emphasis on the development of English skills, many of these students were enrolled in an after-school English program; their parents were willing to
send their children to the costly tutorial programs because they believed that proficient English skills are the prerequisite of getting an admission to a reputable university, and may hence increase the competitive power of their children in the society and the globalized world of the future. This also explains why these parents agreed to allow their children to participate in the *Sister Class Project* as they thought that sharing and exchanging ideas with overseas students would facilitate their children to develop native or nearly native English skills.

All of the participating students had basic computer skills to interact with their teachers and sister class partners in the virtual learning space. Each student was provided with either a computer or a laptop to work on their project in schools. The students who had limited access to computer at home (e.g. sharing a computer with siblings) were encouraged to use the laptops available in the classroom or work in the computer lab after school. Both the teachers and the researcher were happy to help those students, who were not confident enough with their computer skills, to learn the major functions of the computer/laptop to participate in discussion forum, do Internet research, design and create PowerPoint/ computer-generated presentations, incorporate visual resources or animations, and produce their electronic identity texts.

### 4.6 Recruitment and Grouping of Participants

Similar to the Canadian school system which consists of 8 elementary levels (Grade 1-8) and 4 secondary levels (Grade 9-12), the Hong Kong school system is composed of 6 primary levels (P. 1-6) and 6 secondary levels (S. 1-6), for a total of twelve years of elementary and high school education. The major reason for choosing a group of students from Canada and a group from Hong Kong as the project participants was that both of the Canadian government and the Hong Kong government were advocating the adoption of new technologies in school contexts to enable all students to learn literacy skills and academic subjects through effective ICT-mediated tools. The subjects of the *Sister Class Project* were Grade 7 (and S.1) students who were expected to have basic computer literacy skills to communicate with their distant peers online to work on an academic project. The rationale of inviting S.1 students from Hong Kong was that these students were undergoing a critical period during their transition from a primary level to a secondary level. All Primary 6 students in Hong Kong are required to pass a standardized test developed by the Education and Manpower Bureau of Hong Kong in order to enter into the secondary program.
offered by their feeder school or to be admitted by high-ranking (Band 1) secondary schools. Previous studies (e.g. Man, Coniam & Lee 2003) found that a large number of S.1 students experienced educational difficulties when learning entirely new subjects and curriculum in a new environment. Such challenges are even greater for those students who are transferred from a CMI (Chinese as the medium of instruction) primary school to an EMI (English as the medium of instruction) secondary school. The 3-month bridging program for S.1 students, which aims to prepare CMI primary level students to study an EMI secondary curriculum, has been criticized as insufficient and ineffective (e.g. Johnson, 1998) because of the lack of eligible bilingual teachers and the inconsistency of program goals and plans. In this regard, the Sister Class Project was intended to offer English teachers in Hong Kong some new insights to improve their existing instructional methods to help S.1 students succeed educationally and intellectually in the secondary program.

In a similar vein, many parents and literacy teachers in Ontario are very much concerned about the Education Quality and Accountability Office (EQAO) test established by the government in 1996. This large-scale, standardized test is designed to test students in Grade 3, 6, 9, and 10 in reading, writing and mathematics. However, the EQAO test has been facing a lot of criticism in terms of its security, timelines, validity, and use of data. The Elementary Teachers’ Federation of Ontario (2011) argues that large-scale assessments like the EQAO test for Grade 3 and Grade 6 students cannot give parents a true or full picture of their children’s progress because: 1) students are not allowed to interact with their teachers or other students during the test. This is not the normal classroom experience that they are familiar with. 2) The test’s multiple-choice format cannot accurately evaluate students’ knowledge or critical thinking ability as expected by the provincial curriculum. 3) The test itself does not assess the child’s overall academic performance or the whole school curriculum. 4) The test only provides one assessment which may limit the test accountability and reliability. 5) School boards only release the school scores to the media, but rarely share them with parents and students. The test data is simply used to rank schools without taking their background information or other factors into account, and hence does not

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3 All public schools in Hong Kong are ranked into three bands (band 1 schools are ranked on the top, and band 3 schools are at the bottom of the scale) based on students’ academic outcomes, percentage of student admission into local universities and colleges, teachers-student ratio, and schools’ teaching goals and teaching methods, medium of instruction, subject choices and class size.
offer any substantial help to students, parents and teachers. Although the EQAO test is condemned of narrowing the school curriculum to a test-oriented one, and the accountability of the test scores are questionable, all students who attend public schools in Ontario and who follow the Ontario school curriculum are expected to write this test in the designated grades as a graduation requirement. This may pose additional pressure to ELL students and new immigrants who lack literacy skills adequate to succeed in the test and school programs. As a result of these factors, the Grade 7 students from the Toronto school were invited to take part in the *Sister Class Project* because they were in the same grade level as the Hong Kong students, so that they could work collaboratively on a similar curriculum, and might be able to improve their literacy skills to better prepare themselves for the next EQAO test they would need to write in the high school program. Since the class size of the two groups was notably different (22 students from the Toronto team, and 43 students from the Hong Kong team), the teachers and the researcher tried to match 5 students in every group (i.e. each group consisted of 3 Hong Kong students and 2 Toronto peers). All students were guaranteed to receive equal attention and academic support from their teachers and the researcher throughout the data collection process.

### 4.7 Role of the Researcher

Prior to the data collection process in the two schools, I defined my role as a researcher of this project, mainly responsible for observing interactions among the ELL students and teachers in the classroom and the online learning space, documenting the literacy practices and activities of the students and their distant partners, reviewing the literacy logs of the students, interviewing the participants regarding the literacy progress of the students, and analyzing the field notes and other relevant data according to the themes developed through the coding analysis program (discussed in Chapter 6). In addition, I was also intended to provide the participating teachers with support to co-construct knowledge with their students as advocated by the *Academic Expertise Framework* (Cummins, 2001) through the implementation of innovative literacy practices. I worked closely with the teachers in the entire documentation process; however, the instructional initiatives and literacy practices were determined by the teachers themselves rather than the researcher or other project members. In other words, the school curriculum and syllabus were not interfered or interrupted with the participation in this study. The teachers were guaranteed ownership of all the innovative practices they implemented in the project.
Other than simply being an observer in the classroom, I also worked as a facilitator to help the teachers integrate new technologies. For example, I developed a project website (see description below) which served as the major platform for the participants to communicate and work collaboratively in this project. I also worked with the teachers and the school technicians to set up the program in the classrooms where the students were learning their normal curriculum, in computer laboratories where they were actively involved in their sister class connections and discussions, and in the school libraries where they presented their final work with the visual and technological aids. During this initial set-up stage, the teachers agreed to spend three classes inviting me to introduce and orient the students to the operation of the project website and other technological learning tools, to explore with them the possible challenges they might be facing, and to learn the kinds of support that would be available to address and overcome those challenges throughout the project.

In addition to the role as a project facilitator, I was invited by the teachers to coordinate their task-based activities they were planning to implement as they believed that my background would inspire their instructional initiatives in some ways. In a similar vein, the teachers and I were also requested by the students to actively interact with them in class and online in order to better connect them with their sister class partners and promote collaborative learning by giving them academic advice and sharing some of our personal experience relating to their selected topics. Interestingly, our interactions resulted in a shift of power between the teachers/researcher and the students. The students no longer assumed their role of learners, subjects or interviewee; rather, they were now active contributors in using the project website and other multimedia tools, exchanging ideas with their teachers and peers, planning the syllabus and topics with their teachers, and making suggestions to improve the efficiency of their online discussions and group work. Such a shift of power also changed my role from a passive observer in the outer space to an active insider in the interactive space.

4.8 Project Stages and Timeline

The data collection procedures were initiated in September 2004 and completed in June 2005. In September 2004, I started visiting the Toronto school, introducing the *Sister Class Project* and its website to the school principal, the teacher and student participants, and other teaching staff. At the same time, I set up the online network between this school and the Hong Kong school. I
attempted to work with both schools based on an evenly distributed time schedule. From November 2004 to February 2005, I worked closely with the Hong Kong group doing class observations, taking descriptive field notes, and facilitating the students’ online discussions. During March 2005 to June 2005, I stayed with the Toronto group documenting the students’ learning progress and assisting them to produce and present their final projects. Throughout the data collection procedures, I worked in a participatory research mode on a regular basis, spending at least two half days a week in each classroom, to track the students’ usage of the online discussion forum and their literacy progress that might be attributed to their use of the project website. I also conducted focus-group interviews and individual interviews with the students and the teachers respectively to discuss the extent to which the project might scaffold the students’ literacy engagement with academic texts through extensive reading of electronic resources and production of their identity texts. The description, timeline, tasks and activities of each phase of the *Sister Class Project* are summarized as follows:

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<tr>
<th>Phase</th>
<th>Timeline</th>
<th>Tasks and Activities</th>
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| Introductory Phase | September 2004    | - I set up the connection between the two schools by introducing the teachers and principals through emails and encouraging them to share their teaching experiences, expertise, ideas, and progress of the project with each other to allow me to have a better understanding of the teachers’ perspectives about multiliteracies practices.  
- I sent the teachers clear guidelines for using and managing the project website and arranged a visit to the Toronto school to introduce the *Sister-class Project* and demonstrate the website functions to the participating students.  
- The students were encouraged to introduce themselves to their sister class partners and to get themselves familiarized with the website. |
| Experiential Phase | October 2004: Week 1-2 | - The teachers from both schools asked the students to sign up the topics that were generated according to the school curriculum goals and requirements. The students were then matched with their sister class partners based on their topic preferences.  
- The teachers asked the students to brainstorm ideas about their topic to activate their prior experiences, and to develop background information and basic knowledge as fundamental input for their group project. |
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<tr>
<th>Phase</th>
<th>Timeline</th>
<th>Description</th>
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<tbody>
<tr>
<td>Literal Phase</td>
<td>October 2004:</td>
<td>- I started doing class observations in both schools to understand the students’ learning needs and progress.</td>
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<td>Week 3-4</td>
<td>- The students searched for information from the Internet, web resources, class materials, or other written texts for their project, and then selected appropriate texts from multiple resources.</td>
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<td>November 2004</td>
<td>- The students were involved in extensive practices of reading comprehension provided by the teachers. The exercises mainly focused on finding out the correct information from the texts by asking such questions as: When, where, how, and why did the event/story happen? What solutions were suggested to solve the problem highlighted in the text? What was the consequence/outcome?</td>
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<td>Scaffolding Phase</td>
<td>December 2004</td>
<td>- The teachers helped the students relate instructional and textual information with their learning experiences by asking questions like: Have you ever been to that place or seen/try/felt something like this? Have you had similar thoughts/experiences as the writer of the text?</td>
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<td></td>
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<td>- The students were asked to interview some readers about their experiences/ideas with the topic they have chosen.</td>
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<td>- The students were then asked to write a brief, simple report of their personal experiences about their selected topic.</td>
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<td>Critical Phase</td>
<td>January 2005 to</td>
<td>- The teachers tried to promote the development of critical literacy among the students by guiding them to analyze the critical perspective of their identity texts and the statement of problem, finding supportive evidence for their arguments, exploring generalizations of the topic, and coming up with practical suggestions for their research questions.</td>
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<td></td>
<td>February 2005</td>
<td>- The students were instructed to consider such issues as: What is the underlying message of the text? What is the perspective of the writer? Is the argument of the writer correct/valid? Whose interests does the text best serve? Whose voice is missing in the text? How may the discussed topic affect you/society/the world?</td>
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<td>- To act as the editors of their newsletter, the students were taught how to write editorials or critiques of their identity text project.</td>
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<td>- The students were also asked to provide critical feedback and comments to their peers through the discussion forum. They needed to provide a short paragraph reflection to their group members.</td>
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## 4.9 Identity Text Project

Identity texts are different from traditional, standard school assignments in terms of their learning process and outcome. Identity texts allow students to choose their own topic, product structure and layout, and presentation format. Students have full control to decide the way they want to carry out the project making use of their full potentials, innovations and talents that they feel proud to share with their audience. When producing their identity text project, the participating students were encouraged to make use of their previous cultural and linguistic experiences and existing knowledge as effective resources in literacy learning. The students were engaged in various tasks/stages of the project:

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<tr>
<th>Creative Phase</th>
<th>March 2005 to April 2005</th>
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<td>- The teachers encouraged the students to transfer and make use of their previous knowledge to produce qualified academic writings.</td>
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<td>- The students started to write a dual-language article or story on their topic, then asked their parents to proofread their translations, and finally produced their identity text project together. They gathered all information they had collected, designed their newsletter layout and structure, and created their own templates with various multimodal tools.</td>
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<td>- The students learned how to produce their cultural pamphlet and poster to give the audience an overview or introduction of their newsletter.</td>
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<tr>
<td>- The students also learned how to construct their newsletter in a simple webpage and save their project on a DVD.</td>
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<th>Productive Phase</th>
<th>May 2005 to June 2005</th>
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<td>- At the end of the term, the teachers conducted and coordinated a <em>Literacy Fair</em> in the school libraries, allowing the students to present their project in groups to receive feedback from their teacher, peers and parents.</td>
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<td>- To promote their cultural topic in the <em>Literacy Fair</em>, the students were delighted to present their cultural brochures/posters they had created, and received a DVD as a bonus gift in their identity text project. The DVD was composed of the introduction of their topic and the PowerPoint presentation of their project.</td>
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<td>- All of their identity texts were uploaded on the project website, and displayed in the schools’ showcases, allowing the parents or the community to share the students’ educational accomplishments.</td>
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4.9.1 Brainstorming and Planning Stage

In order to activate their prior knowledge and cognitive schemata, the students were asked to brainstorm some relevant ideas and learning experiences about the topic they were working on. They had to take notes of the related vocabularies that their teacher, peers and themselves came up with in class and save them in an electronic file for their identity text production at a later stage of the project.

4.9.2 Outlining Stage

The students started to plan their project outline based on the guided questions provided by the teachers and the researcher (Appendix 4). The students were asked to vote for the best proposed plan among their group members and post their final plan on the website for their teacher’s approval and comments. The students were excited to think of an eye-catching topic for their project. Each group then divided the project into smaller, interrelated sections. The group members decided on their work load for each section.

4.9.3 Researching and Mapping Stage

The students were asked to do research through multiple sources including library resources, Internet materials, textbooks, references, teachers’ handouts, and multimodal materials. They were assigned at least one computer-mediated lesson to do an Internet search under supervision of their teacher each week. Rather than simply posting appropriate web links on the discussion forum, the students were asked to write a short report about the web links by summarizing the main ideas or important messages of the hypertexts, interpreting the meaning of the texts, critically analyzing the perspectives of the authors, and reflecting their own thoughts on the web-based information. They were also encouraged to exchange their researched materials with their distant partners and match them according to the headings and subheadings of their project.

4.9.4 Drafting Stage

The students co-authored their newsletter by writing interrelated texts for each section. They posted their drafts on the project website to get feedback from their group members and the teachers. They learned how to integrate ideas contributed by the whole group and critically evaluate their peers’ writings for academic improvement. The teachers paid attention to the
students’ language use, writing content, syntactic structure and semantic meaning of their identity texts in order to help the students construct qualified academic writings. To show appreciation to the students’ native language and culture, the students were also asked to produce bilingual texts by translating their identity texts into their L1. Stressing the positive inspiration of parental involvement in literacy education, the students were strongly encouraged to ask their parents to proofread or comment on their translations.

### 4.9.5 Producing and Presenting Stage

Once their writing drafts were approved by the teachers, the students were delighted to design an innovative template, structure, and framework of their work by incorporating interesting animations, digital pictures, recorded narrations, and other multimodal features into their identity text project. At the end of the school term, the students presented their project in a *Literacy Fair* in which the school principal, all students and teachers from the same grade level, parents and community members were invited to attend. The presentations were videotaped with the consent of the school, the participants and the parents. Each student finally received a certificate and a DVD of their presentation from the researcher recognizing their achievement in the project. The students were thrilled to share their work displayed on the school showcases and the project website with their overseas friends, family and sister class partners.

### 4.10 Project Website

To assess the potentials of multiliteracies and computer-mediated tools of broadening the traditional literacy concept and the existing curriculum resources available to the participating students, a project website was developed for the participating students to exchange academic and cultural information, share prior learning experiences and knowledge, provide peer review and feedback, and learn from each other’s academic writings to co-construct new knowledge. The project website allowed the teachers to record the students’ participation grades, observe their learning progress, monitor their online discussions, provide immediate academic support and advice, and evaluate their writings in a far more efficient way. The teachers were able to respond to their students’ questions, highlight mistakes in students’ writings with the *track changes* function, provide feedback with the *new comments* function, and integrate an electronic version of their marking rubrics to ensure consistent assessment made by the two teachers from the sister schools. The teachers used the same writing rubrics that they developed to evaluate the
students’ identity texts, enabling them to integrate this project into their current marking schemes and to avoid any intervention to their assessment scales. All participants of the project website were protected under a password-security system so that their personal information, discussions, comments, written texts, and innovative ideas would not be disclosed to the public.

The project website was designed to be an accessible learning tool (Attachment 5) including a brief description of the Sister Class Project, its research questions, method, focus, recent news, and planned stages which were updated regularly. There were six major components on the home page that its users could explore:

1) Multiliteracies Project page: was directly linked with the webpage of the larger Multiliteracies Project which was the fundamental base of this case study.
2) Multiliteracies Cases page: contained the project abstract and school information of each individual case study embedded in the Multiliteracies Project.
3) Learning Resources page: consisted of recent resources, reports and findings about literacy learning that might be helpful for researchers, teachers, students and parents.
4) Sister Class Schools page: displayed the school profile, key contact, major subject areas, gallery and progress of the two participating schools. Students’ identity texts and final projects were published and showcased in the gallery on this page upon their consent.
5) Online questionnaire page: included a short questionnaire interviewing the participating students about their experiences, comments and feedback to the Sister Class Project. The results of the survey were reviewed by both of the teachers and the researcher. The questionnaire might help the researcher to further develop and expand the questions for focus group interviews conducted at the end of the project.
6) Knowledge Forum page: was a platform designed to involve the participating students and teachers in efficient online discussions. It was a password-protected forum to which the participants were required to register a new account with their own user ID and a password. The students could post messages, share information/ texts/ learning resources, and even upload visual and audio materials on this page. They could also keep a record of all conversations with their group and the feedback from their teachers so that they might retrieve, select and reuse the information to produce their final project.
The Knowledge Forum has been a standard discussion medium widely used at OISE/UT and was incorporated into the project website. With its flexible, user-friendly functions, the teachers and the researcher were able to observe, monitor and facilitate the students’ discussions in this virtual learning space. The students were actively involved in group conversations as their schools were willing and passionate to integrate ICTs with their curriculum. For instance, the Hong Kong school offered a multi-media lesson to all students once a week. The teacher and the students could make use of this chance in the computer lab to communicate with their distant peers and report their project progress through the Knowledge Forum. Similarly, the Toronto school installed 30 new laptops which were made available for all students in class with the support of high-speed wireless cable service or to borrow to take home after school hours, allowing the students to work more closely with their sister class partners. To provide students with sufficient technical support, the researcher was responsible for a) generating guided questions for each group on the forum, b) maintaining personal profile and individual contact of each participant, c) facilitating students’ discussions, providing clear guidelines and instructions at each stage of the project, d) assisting the participants to upload and download relevant materials in the shared directory and the web resources file respectively, and e) providing critical answers to the students’ messages and questions. The forum served as a primary communicative tool for the students to check messages and share ideas frequently on their home computer, or school laptop, or in the computer lab. It could efficiently save the participants’ messages and shared materials for up to five years (with possibility to extend) and keep track of the students’ daily log of online activities for research and evaluation purposes.
Chapter 5
Research Methodology and Data Collection Process

5 Case Study Research Methodology

The *Sister Class Project* is a qualitative case study. It primarily aims to describe a particular case of two sister classes in a collaborative learning process in order to offer in-depth analysis and richness of information to identify a complex set of interrelated research outcomes. The case study method is not a new form of research. It has a long history in many disciplines and research areas including sociology, anthropology, psychology, political science and so forth, and is becoming extensively employed in educational research. It is increasingly appealing to educational researchers because it is intrinsically interested in testing the effectiveness of a specific instructional strategy for certain subjects. This chapter explains how the *Sister Class Project* may achieve the goals of conducting comprehensive research by adopting the case study method. It begins with a brief discussion of the definition, category, functions, and purposes of case studies. Drawing on several well-documented educational case studies, it then evaluates the strengths and limitations of the case study method in terms of its validity, reliability and generalizability. It finally describes the data collection process of the *Sister Class Project* examining the effectiveness and applications of major case study research tools such as students’ literacy logs, class observations, semi-structured interviews, students’ online discussions, students’ identity texts, and written reflections.

5.1 Definition of the Case Study Method

The definition of the case study method is not always consistent because the meaning of *case* “is not independent of interpretive paradigm or methods of inquiry. Seen from different worldviews and in different situations, the “same” case is different… And the definition of the *case* changes in different ways under different methods of study” (Stake, 2000, p.449). Different researchers define this method from different perspectives. For example, Stake (2000) defines a case study in terms of the *unit of analysis*, that is, the object of the study. But this interpretation is challenged by Bassey (1999) who argues that the unit of analysis can, in practice, mean anything. While some of the pioneers of this research methodology, such as Sanders (1981) and Yin (2013), focus on the *research process* to describe a case study as an empirical inquiry of a social phenomenon,
others like Merriam (1988) and Wolcott (1992) regard it as an *end product* of an investigation rather than a research strategy, suggesting that a case study is an “intensive, holistic description and analysis of a single entity, phenomenon, or social unit” (Merriam, 1988, p.21). In short, a case study can be defined in terms of its objectives, research process, unit of analysis or end product. Each approach contributes to a more complete picture of the definition of the case study method. In this chapter, I opt to discuss the meaning of this method in terms of its *research purposes* because the prime nature of a case study usually depends on what the researcher wants to explore from the study.

Although there is still no universal consensus of the actual meaning of the case study method, researchers tend to agree that it is a holistic, in-depth investigation of a discrete social unit such as a school, a social group, an institution, or a community (Zainal, 2007). Yin (2013) originally defines this method as an empirical inquiry that investigates an existing phenomenon within its real-life context. It involves a *detailed* examination of a subject or a group as an entity through multiple research strategies including questionnaires, interviews, observations, self-reports, document reviews etc. (Kohlbacher, 2006). By employing multiple research tools, the case study method enables researchers to closely examine their findings within a specific context, and “investigate contemporary real-life phenomenon through detailed contextual analysis of a limited number of events or conditions, and their relationships” (Zainal, 2007, p.2). It also helps readers construct experiential knowledge (Denzin & Lincoln, 2008) by assimilating observational descriptions into their memories. When case study researchers offer readers vicarious experiences through narratives of naturalistic observations, readers’ memories will be activated when they become aware of what is described in the study, as if they had experienced it (Stake, 2000). This method may also offer inspirations to explain previously unexamined human behaviors and help researchers gain new insights to structure future research questions (Mertens, 2014). In this regard, the case study method plays a crucial role in constructing a knowledge base for investigations, has become popular in educational research for its usefulness in studying educational innovations, evaluating programs, and analyzing policies to improve overall education practices (Merriam, 2002).
5.2 Types of Case Studies

The fundamental goals of the case study method are to derive comprehensive understanding of a case, develop theoretical statements of social practices, and offer new variables for further research by intensively studying the experience and perspectives of a given social unit (Yazan, 2015). This method may vary in complexity as its focus may be on a single individual or a group of subjects, and its scope may encompass an entire life cycle or a specific time segment. It may also vary in purpose because of its high degree of flexibility and adoptability to a wide range of contexts, subjects and foci (McMillan & Schumacher, 2014). The variations of research purpose often reflect different types of case studies. This section discusses how case studies are classified into different groups based on researchers’ interests in educational research.

Researchers may conduct a case study to satisfy three major tenets of qualitative methods: understanding, explaining, and describing, which respectively identify three specific types of case studies: exploratory, explanatory, and descriptive (Yin, 2011). Exploratory case studies aim to identify research focus and formulate questions for later research. They may be used as pilot studies to determine the final protocols of main investigations. They are hence considered as prelude to large-scale research (Tellis, 1997). Curtis (1999) carried out an exploratory case study to explore the effects of collaborative learning in online conversations. The positive findings of collaborative online learning suggested future research to examine how ICTs may promote academic learning. Explanatory case studies are designed to explain a specific event by carrying out causal investigations in which researchers look for relational patterns (Gall, Gall & Borg, 1999) between two phenomena within a case or across cases. Matthews and Yip’s explanatory case study (2000) of a Hong Kong bilingual child explicated that syntactic transfer in early bilingual development depended on patterns of language dominance and properties of the dual input the child was exposed to. Descriptive case studies aim to clearly depict and conceptualize a social phenomenon. These studies generally offer a thick description which means a full, rich description of the entity being studied (Gall, et al., 1999). They are particularly useful for examining educational practices to form a database for policy comparison or theory construction. Laws and McLeod (2004) documented Moore’s descriptive case study of high school interns in diverse non-school settings to see how newcomers in various organizations learned. The study used descriptive data to devise a conceptual framework about learning in out-of-school contexts.
It is necessary to stress that a single case study may not always fit neatly into these categories, because researchers may have several interests when conducting a case study, or the study itself may either overlap more than one category or stand outside them (Bassey, 1999). The case study method adopted in this *Sister Class Project* was exploratory insofar as it was intended to explore how computer-assisted technologies can enhance ELL students’ literacy skills and academic performance. In the meantime, it also served descriptive purposes insofar as it aimed to offer a thick description of the *Sister Class Project*, through a detailed analysis, in order to contribute to refining the existing *Multiliteracies Framework*. I acknowledge that there are more types of case studies used in other disciplines. It is, however, beyond the scope of this dissertation to discuss the features of each one of them. The categorization discussed above is heuristic rather than taxonomic or determinative (Stake, 2000). The thesis here aims to stress the importance of the *research purpose* in categorizing case studies. Regardless the form or structure taken in a research project, the case study method is worthwhile in refining theories and suggesting new directions for further investigations.

### 5.3 Functions of Case Studies

The case study method has become a useful research strategy in educational fields because it allows investigators to pursue crucial educational issues empirically and hence generate new ideas for educational research. A case study may be used to evaluate educational programs and make judgments about certain educational policies. It has been argued that the case study method is a highly useful research tool for project evaluations since it “provides thick description, is grounded, is holistic and lifelike, simplifies data to be considered by the reader, illuminates meanings, and can communicate tacit knowledge” (Merriam, 2009, p.49). Also, a case study may be appropriate in identifying the issues of policy implementation or policy planning in various socio-cultural contexts. By analyzing the attitudes of educators and policymakers toward a proposed educational act, a case study may suggest the need to modify existing educational policies. These two functions explain why the case study method is sometimes regarded as a step

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4 Stake (1995) categories case studies into intrinsic, instrumental, and collective. White (1992) classifies social science case studies into identity, explanation, and control. Other types of case studies include life history case studies (Lawrenson, 1994), action research case studies (Stenhouse, 1988), journalistic case studies (Yin, 1994).
to action for formative evaluation and policy making (Cohen, Manion & Morrison, 2017). The third prominent function of the case study method is its usefulness for developing theories and research-based knowledge. It can be a supportive tool to “elaborate a concept or develop a model with its related subcomponents and empirical meanings” (McMillan & Schumacher, 1997, p.395). A case study may also identify conflicting views of participants, thereby enabling more comprehensive interpretation of the data. Finally, a case study may contribute to large-scale research by highlighting the interrelationships among sub-studies to allow for greater generalization to theorize a broader context (Berg, 2001), and to function as a precursor to other quantitative research studies. It is common for quantitative researchers to conduct a preliminary qualitative case study to collect “participant-observation data” (McMillan & Schumacher, 1997, p.397) before employing any structured designs or statistical analysis.

5.4 Purposes of Case Studies

Proponents of the case study method (e.g. Bassey, 1999; Yin, 2013) argue that this method is gaining popularity in qualitative research because it offers an intensive analysis of multifarious phenomena by using various research strategies in a triangulating fashion to make the study more reliable and applicable. Unlike most statistical research methods which handle data collection in isolation from other aspects of the research process (Yin, 2011), this method is relatively flexible in its formats, enabling researchers to explore critical issues rather than predicting the possible outcomes of experiments. The greatest advantage of the case study method is its potential depth (Ary, Jacobs & Razavieh, 2002) in examining complicated social units. To provide a thick description of an individual or a group of research subjects, case study researchers generally investigate the subjects’ whole range of behaviors by discovering many variables that are influential to the history and development of the subjects. Researchers tend to gather all information about the subjects’ previous experiences, backgrounds and personal perspectives relevant to the research topic. Since case study observations normally take place over an extended period of time, researchers may develop an intimate relationship with their subjects, allowing them to establish trust with participants (Johnson & Christensen, 2000), discern the subjects’ ongoing behaviors and make appropriate observational notes (Cohen & Manion, 1994). Persistent observations may also enable researchers to identify salient issues and avoid drawing premature conclusions (Mertens, 1998).
Kagan (1993), for example, collaboratively conducted a case study with four teachers by investigating their professional lives in a Teacher in Residence (TIR) program at the University of Alabama. Kagan collected a substantial amount of data by involving fieldwork in which she interacted with the teachers in natural settings describing their positive and negative experiences in the TIR program. She audiotaped 90-minute interviews with each teacher, transcribed and analyzed the interviews to construct coherent narratives of the teachers’ reflections to the program. Two preliminary interview reports were sent to the teachers for corrections and feedback. Both of the researcher and the teachers were involved in an “iterative process of constructing meaning” (Kagan, 1993, p.428). As co-authors of the study, the teachers were invited to edit the research reports and related articles for publications written by the researcher. The intensive data reflected an in-depth examination of the teachers’ training experiences functioned as useful background information for planning major investigations, and bridged the gap between abstract research and concrete practice by allowing researchers to compare their initial observational notes with the quantitative results obtained from other research methods (Palmquist, 2004). In this regard, the Sister Class Project hoped to include the teachers’ voices by inviting them to comment on the observational notes as well as edit the research reports and publication papers prepared by the researcher to provide a thick description of the study.

The integrity of case studies usually depends on the issue of validity. Validity refers to the degree of accuracy of a specific concept that researchers try to measure in a study. Researchers need to be concerned with internal validity and external validity. Internal validity (or credibility) is the extent to which research findings match reality, while external validity refers to the extent to which research results can be applied to other situations, that is, the generalizability or transferability of research findings (Merriam, 1998). In Kagan’s study (1993), two strategies were adopted to enhance its internal validity. First, Kagan used member checks by sending the observational and interview notes to the teachers for comments and inviting them to write up the report in order to represent their viewpoints accurately. Second, she used triangulation by employing multiple research methods to confirm the consistency of several data sources and verify the replication of an observation for interpretation (Mertens, 1998). This Sister Class Project was intended to show the merits of triangulation of producing various data from field notes, interviews, written reflections, and verbal statements to validate research materials, offer a holistic picture of the issue, and increase the credibility of the research findings.
5.5 Limitations of the Case Study Method

The case study method frequently struggles with the issue of depth-or-breadth. The strengths of sufficient depth of the case study method, however, are also the weaknesses of its limited breadth. Its lack of representativeness is attributed to its difficulty to make generalizing conclusions as it is often based on subjective data of a single case. This approach is thus stereotyped as a weak research method of analytic generalization (Yin, 2011), and its external validity is questionable. Chung and Yuen’s case study (2003) of a group of primary students in Hong Kong examined the impact of a 5-month hypermedia training program on students’ creative thinking. The research data, collected by observing students’ experience and reflections to the program, suggested that effective use of computers helped students construct knowledge and enhanced their creativity. However, the research results “could not be generalized to all Hong Kong primary schools” (Chung & Yuen, 2003, p.24), because the findings were drawn from one school and could not reflect the views of all students from other schools. To improve the generalizability of this method, researchers may conduct collective case studies (Stake, 2005) to investigate multiple cases from several social contexts. The larger Multiliteracies Project (Cummins & Early, 2003) was attempting to achieve this research goal by analyzing the findings of multiple, related case studies. When various cases are included, researcher’s interpretations can be more convincing and the study’s validity can be strengthened (Huberman & Miles, 2002).

The major criticisms of case studies include the inherent subjectivity of observations, and the lack of consistency in data analysis that may cause bias (Woodside, 2010). Specific cases may be selected as they fit researchers’ preconceptions. A case study may rely on the investigator’s personal interpretations that may run the risk of inferring discrepancy from reality and deviating the research outcomes. The subjective, idiosyncratic nature of a case study explains why it is criticized as biased and lack of quantifiable measures that are the hallmark of experimental and survey research (Flyvbjerg, 2006). A good strategy to control bias in a case study is increasing its reflexivity (Anney, 2014) which is the use of self-reflection to recognize one’s possible bias. Case study researchers may use reflective journals consisting of a daily schedule, methods logs, and reflections of thoughts and questions when doing data analysis (Denzin and Lincoln, 2000). In this regard, the Sister Class Project invited the participants to reflect on the adoption of multiliteracies practices in academic learning to ensure a high level of reflexivity of the study.
Limited reliability is another criticism of the case study method. **Reliability** means the extent to which any research procedure yields the same result on repeated trials (Palmquist, 2004). Unlike most quantitative studies which have tight controls of reliability, a case study usually expects variability because its contexts may change. Therefore, “consistency is looked at as the extent to which variation can be tracked or explained” (Ary, et al., 2002, p.455). Although reliability in the case study method may be problematic as human behaviors are never static, it can still be ensured by using triangulation, explaining the underlying theory of the study, and describing in detail how the study is conducted and how the findings are derived (Merriam & Tisdell, 2015).

The *Sister Class Project* therefore used triangulation by employing various qualitative methods of data collection (e.g. students’ literacy logs, observational notes, interviews, written reflections etc.) to study the ELL students’ literacy learning through the multiliteracies approach.

The reputation of the case study method has suffered mainly because of its lack of general applicability either to confirm or refute empirical findings. This criticism, however, is challenged by a group of researchers (e.g. McMillan & Schumacher, 1997) who argue that generalizability is not the immediate purpose of a case study. The primary function of a case study is “not as tool for testing hypotheses but rather in producing hypotheses” (Ary et al., 2002, p.441). It is unjust to criticize a research method for failing to achieve a goal which was never originally designed to accomplish in the first place. Although it is difficult to combat the challenge of limited external validity of a case study, Palmquist (2004) suggests that researchers might draw their conclusions based on a larger number of samples and multiple data sources to increase the generalizability of the study. This explains the high level of validity and applicability of the *Multiliteracies Project* which suggested the power and efficacy of identity texts in literacy learning by concluding the findings and data from numerous case studies across the country (Cummins & Early, 2011).

Despite the fact that the case study method has been subject to some criticisms in the research literature, it remains a desirable method in qualitative research. It is important to remark that no single method can be applied in all research disciplines because it cannot have complete advantages over the others. In this regard, a case study may be used in combination with both qualitative and quantitative strategies to make it a more productive research method. It can be a valuable research inquiry tool once its functions are better understood and used by potential researchers, its research purposes are clearly stated, and its guidelines of protocol design are carefully planned.
5.6 Data Collection Procedure

Recognizing both of the strengths and limitations of the case study approach, the Sister Class Project tried to ensure the reflexivity, reliability and validity by using triangulation methods including students’ literacy logs, regular class observations and field notes, video-tapping of class activities, semi-structured focus group and individual interviews, online discussions, students’ academic writings and identity texts, and participants’ written reflections.

5.6.1 Students’ Literacy Logs

The participating students from both schools were invited to fill out a brief bi-weekly literacy log (Attachment 6) reporting their literacy practices and learning progress in and out of schools. In each literacy log, the students needed to provide the information of their usage of languages (i.e. target language and home language), printed and electronic texts, online discussions, and multimodal learning tools. They needed to answer a few simple questions in the log regarding their purposes of reading, the amount of time spent on the literacy materials, and their ways and reasons of finding and employing those materials. The literacy logs were expected to contribute to the project in three ways: 1) the students could better understand and reflect on their literacy preference and practice; 2) the teachers could gain new insights for literacy teaching from their students’ reading habit and interest; and 3) the researcher could collect consistent, reliable data for triangulation in the data analysis process.

5.6.2 In-class Observations and Field Notes

In the Sister Class Project, I worked in a participatory action research mode with two half days each week in the classroom. During each school visit, I took field notes documenting the students’ engagement with literacy activities in class. I then wrote up a detailed observational report based on the extensive notes regarding the teachers’ instructional strategies, the students’ responses and learning progress, teacher-student interactions, and the discussions among the students while they were participating in class activities, completing the tasks assigned by their teacher, or sharing ideas with their distant peers on the discussion forum. Each report primarily consisted of a thorough description of my observation of the class progress as well as my reflections on the outcomes of the related literacy practices and students’ learning behaviors. In
addition to taking field notes and writing up observational reports, I also attempted to inspire the teachers to apply new technologies and new literacy practices in their teaching, coordinated task-based activities, promoted collaborative learning among sister-class partners, and provided multimedia instructions, technological support and academic advice to the students.

5.6.3 Video-taping of Class Activities and Presentations

The participants agreed to be video-taped in some of the class activities for the purposes of writing up research reports, exchanging instructional ideas among the participating teachers, and constructing future research and lesson plans. The class activities included the teachers’ instructions on the mandatory topics of their English language curriculum, the researchers’ introduction of the project and all the available technological resources, the students’ reactions to their teachers’ questions and brainstorming of relevant ideas, and the students’ communications with their distant partners and participation in their group work. In addition, the students and their parents agreed to have their project presentations video-taped for research purposes. Each student was given a DVD copy of their presentation at the end of the term, so that they could demonstrate and share it with their families and overseas friends and relatives.

5.6.4 Focus Group Interviews with the Students

To obtain more in-depth feedback and responses from the participating students about their experiences with the Sister Class Project, semi-structured interviews were conducted with the students who have given their informed consent to be audio-taped during the interview. The interviews mainly focused on investigating the students’ use of ICTs in the project, collaboration with their sister class partners, their multiliteracies practices in the classroom and out-of-school contexts, and the cultural knowledge they brought to the project. The interviews were conducted in the school at times that did not interrupt the participants’ normal class activities and learning progress. The students were invited to participate in a focus group interview with 4-5 students according to their time preference. Each focus group interview took approximately 25-30 minutes. The semi-structured interview questions (Appendix 7) were sent to the teachers, students and their parents for review before the interview took place. The students could feel free to answer the questions and express their own thoughts about the project. They could also refuse to respond to any questions if they did not fully understand or feel comfortable with them. The
students who have Chinese background were given a choice to be interviewed either in Chinese or English in order to communicate and clarify their ideas more clearly. The interview data was then transcribed and coded according to the major themes of the research including learning motivation, collaborative learning, critical thinking, student empowerment, identity formation, and integration of ICTs with school curriculum that will be discussed in the next chapter.

5.6.5 Individual Interviews with the Teachers

The participating teachers were interviewed at the end of fall term in 2004 and the spring term in 2005, regarding the literacy practices they employed to promote academic and literacy engagement of their students, and their reflections on the integration of multiliteracies practices with the school curriculum. The individual interviews with the teachers from both schools were audio-taped with their consent, and were conducted in school at times that worked conveniently for them. Each teacher interview took approximately 60-90 minutes. The interview data was then sent to the teachers for review and feedback, and eventually analyzed with the same coding system of themes used for the students’ interviews.

5.6.6 Students’ Online Discussions

To fulfill the goal of generating natural student-student and teacher-student interactions in cyberspace, the researcher chose not to interfere with their online discussions unless the students were in need of any technical support for operating the website or asked questions about the project. The students were invited to form a group with those who had common interest in the same topic, and to frequently discuss their topic and work in the forum. They were encouraged to demonstrate both of their independent and collaborative learning skills by posting relevant resources they had individually searched from their course materials or other reliable sources, then selecting and reviewing those resources critically, and finally generating ideas and producing their identity texts together. Throughout the project, the teachers were involved in the interactions between the members of each group to offer guidelines to their subject and written drafts, to answer their questions relating to the theme and curriculum, and to keep a record of their participation for academic evaluations. These teacher-student interactions could possibly inspire the students to better refine and understand their topic through the transformation of face-to-face classroom learning into collaborative learning in cyberspace.
5.6.7 Students' Academic Writings and Identity Texts

The students’ written drafts prepared at different stages as well as their identity texts produced at the final stage of the study were collected and evaluated by their teachers. The students were encouraged to translate their L2 texts into L1 with the help from their parents to produce bilingual identity texts. The evaluation criteria were left open to the teachers, enabling them to integrate this project into their marking schemes and avoid any interference to their assessment scales. The class presentation of each group in the Literacy Fair was videotaped by a digital video (DV) camcorder. A copy of the DVD was sent to the school as their instructional capital and to each participant as a gift of appreciation. Upon the consent of the participants, some of the video clips were finally uploaded on the project website.

5.6.8 Students’ Written Reflections

The students were asked to review other groups’ presentation on a peer evaluation form, reflect on their own learning, and briefly write their comments and suggestions to the Sister Class Project on a reflection journal provided by the researcher at the end of the school term. The written reflections of the participants provided evidence for the research claims of the Sister Class Project, and offered new insights and directions for the multiliteracies pedagogy by enabling the students to recognize the distinctiveness of the new literacy practices in and out of schools, and allowing them to self-reflect on these innovative practices and their learning achievement.

5.7 Task-based Activities

The two participating teachers chose to integrate the Sister Class Project with their curriculum by using various task-based activities that have been widely used in many language programs. Task-based syllabus design has drawn attention and interest of SLA researchers since 1980s (e.g. Crookes, 1986, Long, 1985, Nunan 1989, Prabhu 1987,). In a task-based activity, a task refers to a method of clinically eliciting samples of learner language for research purposes (Corder, 1981) and a device for organizing the content and methodology of language teaching (Prabhu, 1987). Although the term task has been defined and interpreted differently in different contexts of use or in different areas of research (Bygate, Skehan and Swain, 2000), Mojibur-Rahman (2010, p.4)
summarizes that a task is a “workplan, that is, it takes the form of materials for researching or teaching language. A workplan typically involves the following: 1) some input (i.e. information that learners are required to process and use); and 2) some instructions relating to what outcome the learners are supposed to achieve.”

Research supports the position that task-based teaching and learning activities are playing a facilitative role in ESL curriculum in many parts of the world (e.g. Man & Lim, 2003). Task-based activities can be used to create purposeful contexts, generate meaningful input, and develop generic skills such as problem-solving, critical thinking, literacy development, innovative skills and positive attitudes among students (Curriculum Development Council, 2002). To enable students to learn the target language effectively, literacy teachers need to design effective tasks which can be used to “motivate learners by appealing to their imagination, providing challenge, developing confidence, providing a sense of achievement, expanding interests, providing enjoyment and providing learners with opportunities to take responsibility for their own learning” (Curriculum Development Council, 1999, p.41-42). The identity text project discussed in this dissertation attempted to meet the three crucial requirements of an effective task suggested by Man and Lim (2003, p.164):

5.7.1 Step 1: Initiation

Initiation refers to how learners interact with the authentic input in each task. This usually involves reading interactive texts online, listening to audio clips or stories, and watching video clips or news-on-demand. The ELL students of the Sister Class Project were extensively exposed to the target language through printed texts, electronic texts, newspapers, magazines, advertisements, visual images, pictures, graphics, downloadable videos, audio clips, television and radio materials and so on. The Internet offered the participants an excellent opportunity to receive plenty of authentic L2 input to work collaboratively on their project. The teachers and the researcher provided the students with sufficient resourceful web links and printed materials from which they could search for useful information for their own project. It is believed that ICTs are capable of “making contextual support easily and readily available to learners and provide them with quality input for task execution and completion” (Man & Lim, 2003, p.162).
5.7.1 Step 2: Interaction

*Interaction* refers to the contact and collaboration after the initial exposure to the authentic input. In a typical classroom setting, the teacher may initiate pair work, group work or brainstorming sessions to generate constructive and creative ideas regarding the academic topics discussed in class. The participants of the *Sister Class Project* worked closely in small groups and were asked to brainstorm some interesting ideas related to their topic. These collaborative activities provided those ELL students with positive interactions with their peers and teacher which in turn promoted their literacy development and academic attainment.

5.7.3 Step 2: Interactive writing

*Interactive Writing* involves language learners putting together their thoughts, views, and opinions and meeting the ‘real audience’ on the designated website. It is believed that by exposing ELL learners to an open authentic audience in real life communications, they will be truly immersed in the target language. The participants of the *Sister Class Project* were engaged in frequent interactions with ‘real audience’ (i.e. their group members and teachers) by sharing ideas for feedback and posting written drafts for peer review on the project website. In short, this study facilitated not only the students’ communicative skills through online conversations, but also their reading and writing skills through plentiful practices of reading hypertexts, texting their distant peers, synthesizing numerous texts, writing simple reports and comments, and designing and creating their final project.

In summary, the task-based approach may bring new insights and potentials to literacy teaching, but it has a long way to go before it can claim a full success in the field of *Second Language Education*. Mojibur-Rahman (2010) suggests that more quantitative and qualitative data is needed to enable case studies to collect and provide useful empirical data in this context. The data collected in the *Sister Class Project* was descriptive and presenting classroom experience which may contribute to the growing number of case studies in applying the task-based approach in second language instruction.
6 Coding Analysis with NVivo

To analyze the extensive findings collected in the *Sister Class Project*, I chose to use the QSR NUD*IST* (NVivo) software to code the triangulated data derived from class observations, field notes, interview transcripts, written reflections, and document analysis. “NVivo provides a range of tools for handling rich data records and information about them for browsing and enriching text, coding it visually or at categories, annotating and gaining accessed data records accurately and swiftly…. It offers many ways of connecting the parts of a project, integrating reflection and recorded data” (Richards, 1999, p.4). The primary function of NVivo is offering an efficient coding system based on which researchers can organize, classify, categorize and examine their large body of data in a systematic way. “A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (Saldana, 2016, p.4). It is always common for qualitative researchers to code their data more than once in order to ensure the validity of their study. “The portion of data coded during first cycle coding processes can range in magnitude from a single word to a full paragraph, an entire page of text or a stream of moving images. In second cycle coding processes, the portions coded can be the exact same units, longer passages of text, analytic memos about the data, and even a reconfiguration of the codes themselves developed thus far” (ibid, p.4). Charmaz and Henwood (2007) describe coding as the *critical link* between data collection and explanation of meaning. Richards and Morse (2013) agree that coding is also a *linking* process rather than simply a *labeling* practice because it enables researchers to make meaning of their findings by matching the qualitative data with their research claims or themes. Saldana (2016) further explains the merits of coding in qualitative research by arguing that when researchers apply and/or reapply codes to various themes or categories, they can codify their qualitative data that can be divided, grouped, regrouped, reorganized, and finally linked with each other in order to consolidate meaning and develop logical explanations.
Holding the strong rationale of coding rich data records with the support of NVivo, this chapter analyzes and discusses the research outcomes and project findings, including the transcribed interviews, field notes, and students’ identity texts and written reflections, in six major themes that are systematically coded and closely tied with the research claims in the Multiliteracies Framework (New London Group, 2000) and the Academic Expertise Framework (Cummins 2001). To answer the first research question focusing on the learning process of ELL students, I chose to use the themes: 1) Collaborative learning, and 2) Integration of ICTs with school curriculum. To answer the second research question focusing on the learning outcomes of ELL students, I discussed the findings in the following themes: 3) Learning motivation and learning attitudes, 4) Critical thinking, 5) Student empowerment, and 6) Identity formation.

6.1 Collaborative Learning

Gokhale (1995) originally differentiates collaborative learning, defined as an instructional approach in which students work in groups toward a common academic goal, from individual learning, that refers to an instructional approach in which students work independently at their own level and rate toward an academic goal. A large body of empirical research (e.g. Cummins, 2001; Rau & Heyl, 1990; Terenzini, Cabrera, Colbeck, Parente, Bjorklund, 2001) claimed that students are potentially more capable to solve problems and enhance critical thinking in collaboration than working individually in an academic task. Collaborative learning derives from the zone of proximal development (ZPD) coined by Vygotsky (1978) as “the interpersonal space where minds meet and new understandings can arise through collaborative interaction and inquiry.” (Cummins, 2005, p.105), and encourages students to respect and contribute different viewpoints, visions and insights which may consequently foster the development of critical thinking skills. Gokhale (1995) argues that collaborative learning is exceptionally beneficial for ELL students if the purpose of instruction is to enhance critical thinking and problem-solving skills. ELL teachers may consider serving as facilitators for learning rather than simply transmitting information to their students. This involves designing and managing meaningful learning experience and stimulating students’ thinking through real-world issues or problems. The Sister Class Project attempted to scaffold ELL students’ learning experiences and expand their critical thinking through brainstorming relevant ideas, clarifying ambiguous concepts, exchanging different opinions, and evaluating peers’ ideas, which eventually enabled the students to co-construct new knowledge in the ZPD space of collaborative learning.
The ELL students in this study were active and enthusiastic in learning from each other and were disciplined in following the planned stages of their identity text project. In the brainstorming and planning stage, the students were keen to know more about the project goals, their sister class partners, the scope of their project, and each function of the project website. They excitedly asked the researcher and teachers questions about this innovative project and shared their prior experiences of using different computer-related tools and social media networks. Once they had learned the project web tools and formed their groups, they started interacting with their distant peers in the discussion forum by brainstorming interesting ideas and sharing personal stories about their topic. The students learned how to expand their ideas by typing key words in the search engine on the Internet and in their school library catalogue. A student expressed that this process helped her understand key concepts and acquire new knowledge she has not learned yet.

“I think reading messages from my group members is very useful as they share some information I’ve never known. Some information is new to us. For example, when our group researched ‘environmental problems in Canada’ on Google, we better understood how acid rain may lead to climate change as we have learned this concept in our textbook; we have also learned that Canadian oil sands may create energy boom and other environmental problems that is not explained in our text. So we raised this in the forum and sister class friends respondeed very fast by sharing information from their handouts and library sources. There is so much to read and explore…..” (Student Interview, Toronto school, 2005)

In the outlining stage, the students worked together in the discussion forum to answer the questions of the guided questions provided by the teachers, and then came up with the major discussion points in their outline. With different ideas and diverse opinions in a group, the students learned how to resolve different arguments and thoughts with their peers. The group working on the topic Travel around the world brought up many ideas regarding the title, headings of each section, and directions of their identity text project. A student from that group strategically summarized the key points of her peers and developed a structured outline (Appendix 8) after a long negotiation with her group. In a similar vein, a student from the Natural resources and environmental problems group made effort to connect her topic with the required subject discussed in the textbook by encouraging her group to provide explanations of natural resources and man-made resources in their project, showing that the Sister Class Project integrated properly with the school curriculum and enabled the students to apply their learned concepts or knowledge in real practices.
In the research and mapping stage, the students learned how to do library and online research and how to critically select relevant materials among innumerable sources. The participating teachers arranged two library visits with a library instructor guiding the students to use the library catalogue and locate different resources, and four multi-media lessons with a lab assistant teaching the students the primary functions of all the technical equipment including desktops, laptops, scanners, printers, projectors, digital camcorders, and other digital devices available in the computer lab. With the assistance of the teachers’ guided questions, the students were able to collect appropriate information from multiple sources and match it with the outline they have developed. The group working on the topic Natural resources and environmental problems shared numerous materials in the discussion forum. A student from this group was excited to select the useful information for her topic. She gathered the web resources and scanned texts that her teacher and group members have posted on the forum and asked the group to work together to highlight the important arguments and ideas so that they could develop their written work (Appendix 9). This matching process allowed the students to map every piece of the information they had carefully selected, connect with their school syllabus, and finally come up with a concrete plan for their academic project. This research and mapping stage was lengthy but rewarding because it has successfully turned the ELL students from being willing consumers of English, who habitually accept every part of the target language without questioning its meaning, to critical consumers, who are able to select and screen messages in the target language that they find useful, correct and relevant (Cooke, 1988).

In the drafting stage, the students learned how to synthesize arguments from various sources and write coherent paragraphs for their project. The teachers offered sufficient writing support by explaining writing strategies of different genres in class, providing handouts of those strategies and marking rubrics in a table format, and practicing those strategies with the students with extensive writing exercises. The teachers started with small writing tasks by asking the students to produce an eye-catching title and a well-organized outline for their identity text project. Then the teachers guided the students to categorize and match important arguments and discussion points from the textbook and the students’ own research in different sections and subdivisions of their project. The teachers subsequently supported the students to write short paragraphs by summarizing some printed readings, synthesizing some useful web resources, and analyzing the issue with their opinions. When the students completed their first draft, the teachers helped them
post it on the project website and asked them to exchange it with a partner in class to receive feedback and comments. The teachers emphasized that this peer evaluation process would be marked and evaluated to make sure that the students would receive constructive feedback that might help them better improve their work and critically learn from each other through collaborative reflections.

An ELL student from the Natural resources and environmental problems group drafted a text (Appendix 10) discussing the problems of air pollution and water pollution as well as the common natural resources available in Canada she had researched both from her textbook and online resources. When she described the major causes and harmful effects of air pollution, she associated the learned concepts and knowledge with her personal asthma problem that might be worsen by polluted air or smoke from factory pipes or chimneys. She then shared her parents’ thoughts that pollution might be less severe in Toronto compared to other populated countries or cities and hence children born with asthma might be more fortunate to be raised here. This scaffolding experience and parental involvement in the project greatly motivated the student to further explore the topic by asking her sister class partners to describe the primary types of pollution in Hong Kong, compare pollution problems between Canada and Hong Kong, and share the possible health issues that may be caused by pollution. This student was taking a leading role in her group and demonstrating a good learning model by posting her written work connecting her life experiences with the discussed topic, asking for peer review and feedback, sharing interesting pictures and web sources, and asking her sister class partners relevant questions which consequently stimulated active interactions among all members in the group to share their drafts and collaboratively build up their identity text project with rich content and captivating materials.

Another thought-provoking finding is that this student took her teacher’s advice to discuss practical implications for her topic, and finally brought up the Kyoto Accord at the end of her revised text (See also Appendix 10). She researched detailed information of the Kyoto Accord from an online source (that she has provided on her post) and summarized the objectives and terms of the treaty in her own words. She learned that this international treaty aims to fight global warming by reducing greenhouse gas in the atmosphere and current emissions on developed countries to a level that can prevent dangerous anthropogenic interference with the
climate system (UNFCCC, 1992). She tactfully discussed the effectiveness of the treaty in order to offer possible solutions to the pollution problems she had previously reviewed. Rather than merely raising an environmental problem in the project, this student made a wise decision to provide useful suggestions to conclude her topic. More importantly, this student argued in her text that global warming might lead to destructive, dangerous environment problems such as tornadoes, hurricanes, blizzards, and tsunami. The teachers found this talking point might arouse other students’ attention because the Indian Ocean earthquake and tsunami, one of the most lethal natural disasters in the human history, took place in December 2004 and killed more than 200,000 people. This catastrophe happened during the time when the students were participating in the Sister Class Project, so the teachers from the two schools took an opportunity to discuss this incident with all students in class. A student from the HK group was provoked to report her family trip in Indonesia when the tsunami happened and described how people were evacuated and running away from the hazardous zone in tremendous fear. All other students were patiently listening to the personal stories, news reports and other findings their peers shared, showing their sympathetic feelings to those victims and their families, keenly looking for updated news and stories of this tragedy, and trying to continue their conversations in the classroom and the discussion forum in the following weeks.

In this regard, the Sister Class Project enhanced the students’ experiential learning, a form of learning that supports students in applying their learned knowledge or conceptual understanding to real-world issues or situations where the teacher directs and facilitates learning (The University of Texas, 2016). The classroom, computer lab, or online learning space can serve as a setting for experiential learning through such embedded activities as problem-solving tasks, guided inquiries, simulations, experiments, or group projects (Wurdinger & Carlson, 2010). According to the theories of situated cognition and situated learning (Lave and Wenger, 1991), learning is an integral part of social practice, and experiential learning allows students to learn and develop problem-solving skills when unexpected incidents happen in an authentic social context. The discussion of the Indonesia earthquake and tsunami brought up by one student and later widely elaborated by the two sister classes completed the cycle of experiential learning process integrating students’ prior experiences and activities in real life situation, their reflections on experiences, and their conceptualization of existing concepts and application of learned knowledge (Kolb, 1984). This collaborative learning process showed that the students
were able and willing to: a) apply the concepts of global warming and environmental problems they have acquired through formal instruction or past experiences, b) share the news and information of the earthquake and tsunami they have witnessed in a real world setting, c) reflect on their own experiences of natural disasters with their teachers, peers and the researcher, and d) conceptualize and modify key concepts they have learned from multiple sources and apply the refined knowledge in their project-related work to generate new knowledge. The Sister Class Project showed that ELL students were able to benefit from experiential learning by collaboratively solving social or world problems in real practice and co-constructing new knowledge and understanding.

6.2 Integration of ICTs with School Curriculum

With the support of information and communication technologies, the Sister Class Project opened up new possibilities for literacy learning and academic development. ICTs in this project were integrated with the school curriculum to achieve four major pedagogical objectives: a) *Research purpose*: ICTs served as a research tool motivating the students to leap out from a small, restrictive world of textbooks and printed texts to cyberspace where they could explore updated news, rich information, and more in-depth knowledge. b) *Communication purpose*: ICTs enhanced intercultural communications among sister class partners to exchange ideas, express personal feelings, provide quick responses, and receive critical feedback in the virtual learning environment. c) *Writing purpose*: ICTs allowed the students to construct electronic texts and written assignments in an efficient way with the writing functions available on most computers such as spelling and grammar checking, formatting, commenting, referencing and so forth. d) *Designing purpose*: ICTs allowed the students to design and create their innovative projects that could be presented in both textual formats (e.g. printed bilingual identity texts/newsletters, or reflection journals) and multimodal practices (e.g. PowerPoint presentations, dramas or plays, or web exhibits). By learning and utilizing these functions of ICTs in the Sister Class Project, the ELL students were able to reach out comprehensible input in real life situations, seize collaborative learning opportunities outside the classroom without teachers’ assistance, and finally connect the researched information with the textbook units to generate new knowledge together.
6.2.1 Research Purpose

Both the ELL students and the teachers agreed that ICTs brought them pedagogical and learning benefits. Most of the students in their reflection journals reported that the Internet was the most convenient and efficient tool for them to obtain and research information, and they were “usually amazed by the new information they learned online.” (Student reflection, 2005). The students found that the online resources they researched with their teachers’ guidance and approval were updated, varied and comprehensive. The students continued to report in their reflection journals that they were “glad to find a great variety of information which covers many different subject areas” (Student reflection, 2005). The students were also exposed to global, authentic materials on the Internet allowing them to receive world news and better understand the community they were living in. In this way, the students might bring the outside world into the classroom and eventually apply their learned knowledge in real life situations. Similarly, the teachers also appreciated the ready accessibility of the information available on the Internet. They believed that “authentic and real-world learning increased student motivation and generally resulted in a more effective learning environment” (Nunan & Wong, 2005, p.208). The teachers expressed that the Internet largely facilitated their class preparations, and offered them more interesting, inspirational teaching ideas that could in turn motivate their students to learn L2 and the discussion topics, complete written assignments, and produce academic projects effectively. For instance, the Hong Kong teacher was thrilled to see the positive changes of her students’ learning attitudes and progress in a food proposal prepared by the students through Internet search. She claimed that the students’ increased learning motivation would bring long-lasting impact on their education for it might give them incentive to explore related materials about the topic in order to complete their written assignments with greater confidence, and finally expand their knowledge in the learning process.

“What we did before was that the students were given a topic, some related vocabularies, and some print texts such as newspapers, advertisements, worksheets and so forth, and then they had to write a short essay based on those materials. The students were generally not interested in writing compositions. But this time I asked them to do an Internet search in a MMLC [Multi-modal learning class], summarize useful texts, and then create a food proposal, which is one of our textbook units. I found that their learning attitudes have changed in good ways: First, their interest about the writing topic has increased after doing the Internet search. Second, their confidence of writing has increased because they could have some useful, up-to-date information to base on rather than making up a story with their imagination. Third, their general knowledge has expanded through the Internet
search. I believe that language is always integrated with knowledge, meaning that proper language activities may allow the students to learn different knowledge. For instance, the students learned different food ingredients, food receipts and health issues when preparing for a food proposal in this assignment. I found this activity was far more effective than our conventional writing tasks in expanding the students’ knowledge. I myself benefitted in the same way. I was doing research on the Net before I introduced the topic in class. The abundant information I found has indeed inspired me with the idea of creating a food proposal and having them present in a mock food Exhibition.” (Teacher interview, HK School, 2004).

6.2.2 Communication Purpose

The online discussion forum immersed the participants in real language use and meaningful communications with their teachers and peers. The ELL students excitedly interacted with a group of real audience outside the classroom rather than using their computers in a passive, unaccompanied way. They were found to be more intellectually engaged by interacting with their distant partners who collectively enriched the learning context with their background knowledge. They were provided with ample opportunities to interact with an authentic audience in the target language, through situated practice (Legutke, 2005), to discuss their topics and to negotiate meaningful outcomes and solutions. In addition, the online communication platform offered greater flexibility for the ELL students to express their inner thoughts and receive immediate feedback which might not be fully possible in face-to-face class meetings within the time constraints and limited boundary of the classroom. In this regard, the teachers believed that, by encouraging the students to share their personal experience in the online forum, students’ knowledge dimension could be broadened, and their learning could become more dynamic.

“The students’ personal experience is more helpful in enabling them to produce a fruitful and interesting content than just using the textbook. If they are asked to write something they have never experienced or unfamiliar with, they may find it hard to complete the task or may be unable to write in a logical sequence. The students have learned both independent and collaborative skills in the project. On the one hand, they have learned the necessary independent learning skills in the way that they had to search for information on their own; on the other hand, they have learned how to communicate, collaborate, discuss, and work with people from overseas. The students benefitted a lot from their mutual communications. Whenever they came across a problem, they could ask their peers or me immediately on the forum, and their questions would be answered shortly. This was surely an efficient way of giving academic support to the students. They liked doing group work online because they could help each other out through peer review, sharing of information, and discussion of ideas. They were all very enthusiastic to present their project and even asking for more time to do it.” (Teacher interview, HK School, 2005).
6.2.3 Writing Purpose

The computer-supported tools evidently helped the ELL students improve their target language development in two ways: a) Academic language use: The word processing function on the computers allowed the students to follow writing guidelines, correct grammatical mistakes, proofread assignments, and write comments for peer evaluation. From producing short writing drafts to engaging in extensive writing and organizing small pieces in a larger project, the ELL students were able to develop consistent writing habits and routines, and learn to build up useful resources in their writing with the available writing software. The students learned the features and requirements of the academic language by exploring more complex vocabularies, phrases and references from different writing functions on the computers. It is therefore not surprising to find that some students described computers as “another teacher outside the classroom” (Student reflections, 2005). b) Evaluation, collaboration and reflection: The teachers in this project encouraged the ELL students to do peer evaluation by exchanging their writings on the computers which enabled them to make quick, productive comments and to promptly respond and correct their mistakes. This collaborative learning process apparently expanded the scope of students’ writings from different angles and lenses, supporting them to co-construct new knowledge and perspectives in the learning environment. Finally, during reflective practices, the students were asked to rethink and reflect on their project plans, strategies, preparations, writing mistakes, and outcomes. This self-evaluation and reflection process successfully facilitated the ELL students to overcome their anxiety of making mistakes in the target language, confidently accomplish academic tasks in that language, and be more engaged in critical learning.

6.2.4 Designing Purpose

The ELL students were encouraged to produce a variety of texts and engage in creative language use. The PowerPoint functions and web-based presentation tools allowed the students to freely design the format, shape the layout, and create the context of their identity text project which was illustrated in an innovative, artistic style. Not only were the written texts an expression of the students’ inner feelings, but also the creative projects staged during the presentation were representations of their personal identities. The ELL students learned how to use various semiotic resources to express themselves and create meaning (Cook, 2000; Stein, 2000) with ICTs. By investing their distinctive identities in the project, many ELL students stated that they
had “never felt secure or interested in expressing [their] true feelings in any assignments.” (Student interview, 2005). By presenting their final project at the Literacy Fair and showcasing it on the school websites, the students greatly enjoyed the ownership of their work, and felt proud of their linguistic and cultural assets they inherently possessed. The teachers created an engaging learning environment in the classroom and the online platform. They believed that encouraging the ELL students to share their work in multiple forms would help them further appreciate their potentials, talents, knowledge and backgrounds. For instance, the Toronto teacher invited the students to coordinate an Energy Conference to discuss one of the curriculum topics Natural resources and environment problems. The students acted as representatives from an Environmental Protection Department introducing their ideas and suggestions of conserving energy, and the teacher as an officer from the Ministry of Energy in Canada. Through this roleplay, both the presenters and audience were engaged in learning the rich content of the presentations, exchanging constructive opinions and insights, and demonstrating proper academic language and high-order thinking skills throughout the performance.

“The idea of presenting at an Energy Conference was involving. [The students] used PPT and electronic devices to present their topic. Drama always plays an important role in helping students learn literacy. The students were asked to introduce their business to me by explaining how their suggestions might solve environmental problems, and I was representing the Ministry of Energy. This kind of work, again, was more engaging than presenting with their handouts in class…. It is something different from what they have done before. The screen, animations, images, graphics, and visual stimulations for kids, and even we adults, are very important. That’s why they like surfing on the Net so much, because they can get the images in and out, and visit the new world quickly. They need these stimulations for their learning.” (Teacher interview, Toronto School, 2005).

All in all, the Sister Class Project proved that ICTs, when properly integrated with the school curriculum, could effectively promote self-learning, meaningful collaboration, learning creativity, and positive identity investment among ELL students who can be better prepared to fully participate in the globalized world. “It facilitated individualization, autonomy, and enhanced the learning process in general” (Nunan & Wong, 2005, p.209). Redesigning literacy learning is not an all-or-nothing concept, “in which everything is new and the old is dismissed. Instead, the question is how the various old and newly emerging facets fit together, how the design features and their related roles and actions interplay” (Legutke, 2005, p.146). Only when the critical parameters of literacy education are carefully considered can the potentials of ICTs be fully recognized and fulfilled in the interface of traditional and new literacy approaches.
6.3 Learning Motivation and Learning Attitudes

The ELL students have significantly improved their learning motivation and learning attitudes through the innovative teaching approach and multiple forms of literacy practices adopted in the *Sister Class Project* compared to the traditional approach they used previously. According to the students’ literacy logs collected at the end of each academic term, the teachers found that the majority of their students had considerably improved their learning motivation and developed positive learning attitudes in using the target language regarding their reading time, reading patterns, and reading purposes and interest.

6.3.1 Reading Time

Compared to the approximately 5-6 hours weekly reading time before they participated in the project, the students reported that they spent more than 20 hours on average (about half of the students spent 25-30 hours) each week on reading, aside from reading time preparing for tests and exams. The students also exhibited strong interest in using the Internet and social media for communication (more than 15 hours per week), followed by televisions, printed texts, newspapers/magazines, and radio.

“I just find that I’m now reading a lot more than before. In the past, I could hardly focus on reading, especially reading textbooks and doing worksheets or exercise in class. But now I like doing class work because I can read many web information, with pictures, videos and sound, and articles on the computer. Some of the web links provided by our teacher in the worksheets are interesting and easy to follow. I am happy that these all count in my reading log and I find that I can now read a lot faster.” (Student Interview, HK school, 2004).

“I’m now spending at least an hour everyday on the discussion forum to check messages and post something in addition to working in the computer lab, not because our teacher is marking participation, but because I don’t want to miss anything from my group otherwise I can’t catch up with them. That’s why I log in to the forum every day to keep everyone posted.” (Student Reflection, Toronto school, 2005).

Numerous empirical research (e.g. Guthrie, 2004; Krashen, 2004, OECD, 2010) has confirmed the positive correlation between literacy engagement and academic attainment. To maximize the literacy engagement of ELL students, the teachers in the *Sister Class Project* encouraged the
students to read any form of texts because “e-literacy activities, literature literacy activities, non-fiction literacy activities, newspaper and magazine literacy activities, literacy hours were positive predictors of ESL/ELD students’ performance” (Zheng, 2005, p.54). In this regard, the ELL students were motivated to explore and engage in both in-school and out-of-school literacy practices that prepared them for strong literacy attainment.

6.3.2 Reading Patterns

The longer reading time of the students may be attributed to the materials, patterns and formats they were reading in the project. Rather than reading a single type of printed texts required by the curriculum, the students were encouraged to read many different forms of materials that they found interesting and relevant to the topic they have selected, such as e-books, e-articles, e-text, fictions, non-fictions, newsletters, magazines, pictures, video-clips, animated materials, library references and online resources. Some students reported that they have developed a routine of reading even on weekends or holidays during which no formal instruction or teachers’ supervision was given.

“I never liked reading dense, think textbooks or reference books from the library before because I thought they were boring. But now I love all kinds of readings, because my teacher said we could choose whatever we like as long as they are relevant to our topic. There are so many interesting stuff on the Internet to explore, and now I like going to the school library to look for something that can match with my project so that I can share it with my group. My group even went to a public library to do research together last week. We borrowed some reference books and videos like The Guinness World Record which is related to our topic. We watched the video together and wrote down some important points to share with our sister peers online. We gathered very useful information and showed it to our teacher for approval. It was a lot faster than finding materials from tons of books in the library that we rarely visited.” (Student interview, HK school, 2004).

“I no longer feel being pushed to read in this project because I can choose the readings in the library or the Internet I want. Sometimes, I just grab something in hands and read quickly, like manuals, recipes, maps, booklets, school newsletters, community bulletins… I love my Language class more now because our teacher allows us to talk freely in groups. I do not need to sit down and keep quiet during the whole class like before. I can even read and write on the computer, and watch YouTube videos and use some for my project. My parents no longer ask me to stop using the computer when they know I am working on an assignment or a project with it. I really love this kind of freedom.” (Student interview, Toronto school, 2005).
6.3.3 Reading Purposes and Reading Interests

The students reported in their literacy logs that they had multiple goals for reading different forms of materials, listed from the most to least important objectives: to research relevant information for their own project, to establish a social network and share ideas with others, to learn more about the subject taught and the outside world, to explore personal interests, and to show participation and fulfill the course requirement. Those ELL students, who initially started the project mainly focusing on researching relevant information and connecting with their distant peers to exchange ideas, gradually extended their scope to learn more about the subject and the outside world. For example, the groups working on the topic Festivals and Food explored not only the major traditions and customs people usually celebrate on special festivals, but also the historical background and cultural meaning of those activities. The Hong Kong students introduced the cultural food mooncakes, which were originally used by the revolutionaries at the end of the Yuan Dynasty of China to hide important messages aiming to spread and restore special power to their political partners in order to overthrow the Mongolian rulers, and are now regarded as traditional celebrations with family and friends on the Mid-Autumn Festival. In a similar vein, the Canadian students working on the same topic actively discussed the religious meaning of Christmas and celebrations of Christmas in the different cultures on the project website (Appendix 11). A student, who came from a bilingual Chinese-French background, keenly described how French families usually set up the crèche where they place Mary, Joseph, baby Jesus, shepherds, angels, the farm animals, and the three Wise Men. She continued to explain how French people normally prepare for the birth of Jesus at the midnight mass on Christmas Eve, and how family members gather to celebrate the special day with French desserts, food, wine, songs, and gifts at Christmas dinner. Another group member, who came from an Indian background, claimed that his culture celebrates Christmas in a different way and he shared online materials showing how people celebrate the festival in different parts of the world. These students took initiative to introduce their topic by sharing their personal experiences, researching the meaning of their cultural practices and traditions, and excitedly encouraging their peers to upload relevant information and respond with opinions on the topic. The interactions between sister class partners were growing quickly in the virtual learning space as they kept contributing to the discussions with creative ideas, personal knowledge, multiple resources, and constructive feedback.
To sum up, the Sister Class Project improved ELL students’ learning motivation and learning attitudes by encouraging them to extend their reading time, engage in extensive reading, research through multiple sources, re-explore the usefulness of library resources, and build up confidence for their academic writing. These positive learning methods the students received at the initial stage built an important foundation for their identity texts they produced at a later stage.

6.4 Critical Thinking

The Sister Class Project offered the participating students a zone of proximal development (Vygotsky, 1978) in which they learned how to improve the target language, through explicit instruction and sufficient teachers’ support, and solve problems initially with group work and later in independent tasks. Within the ZPD, the ELL students in this study were positively directed and trained to develop critical thinking, which refers to rational, open-minded high-order thinking skill informed by convincing evidence. Learners who successfully acquire critical thinking are able to a) understand the logical connection between interrelated ideas, b) identify, construct and evaluate different arguments, c) discover inconsistencies and common mistakes in logical reasoning, d) solve problems in a systematic way, e) identify the relevance and importance of learned concepts, and f) reflect on the justification of one’s own beliefs and values (Lau, 2011). Recent research (e.g. Bailey & Mentz, 2015; Lau, 2011) has found that L2 learners may considerably develop their critical thinking when they are offered an opportunity to investigate a social problem or issue by asking critical questions, discussing the issue from different angles and directions, concluding the conversation with inspiring answers, and reflecting on others’ values and decisions with rational judgments. In other words, critical thinking can be derived from the process of: a) critical inquiry, b) problem-solving, and c) critical reflection.

6.4.1 Critical Inquiry

The participating teachers in the study tried to help the students develop critical literacy skills by guiding their analysis of the underlying messages of their selected readings and their own identity texts, screen supportive evidence for their arguments, and conclude with promising solutions and answers for their research questions. In order to engage the students in the process of critical inquiry, the teachers prepared and raised such critical questions for discussion as:

What major theme(s) can you find from the text? What is the perspective of the writer? How is
the writer’s perspective similar/different to yours? Are the arguments of the writer correct/valid? What evidence/example does the writer use to support his/her arguments? What is the underlying message of the text? Whose interests does the text best serve? Whose voice is missing in the text? In what ways does the discussed topic affect you/society/the world? These guided questions expanded the students’ scope of thinking by critically analyzing the readings from multiple views to develop deep understanding of the topic rather than reading the texts from a superficial or one-sided perspective.

6.4.2 Problem Solving Tasks
The ELL students encountered different problems at different learning stages in the study such as understanding the objectives of the identity text project, collecting and selecting appropriate materials, connecting the researched materials with their course readings, resolving conflicting opinions in a group, preparing for their written draft, and producing their final project. To strengthen the students’ problem-solving skills, the teachers attempted to relate instructional and textual information of the required readings with the students’ personal experiences by asking questions like: Have you ever been to that place or seen/tried/felt something like this described in the text? Have you ever had similar experiences/thoughts as the writer? The teachers also asked the students to briefly interview their peers, parents, or siblings about their experiences of the chosen topic and elaborate on the interview information in their written draft. In this regard, the students were able to critically scaffold their previous experiences and transfer their learned knowledge to produce qualified writing with rich content.

6.4.3 Critical Reflection
The teachers in the study placed a strong emphasis on the reflection process that could reinforce the development of the ELL students’ critical thinking skills. In each stage of the project, the teachers offered clear, detailed guidelines of different writing tasks and genres including a reading summary, a short interview report, an editorial, a full academic article etc. The teachers encouraged the students to reflect on their own writing with fair-minded judgments and provide critical feedback to their peers through the discussion forum. The teachers provided the students with a template to write a short reflective passage about their peers’ identity texts focusing on the growth of critical language awareness and critical literacy skills.
In the *producing and presenting stage*, the Canadian teacher proposed using a writing rubric she had developed to evaluate the students’ texts consistently and allow the students to reflect on their written work systematically (Appendix 12). The two teachers found the writing rubric useful and efficient in their assessment process. They thoroughly explained the evaluation criteria and showcased writing samples in class so that the students were able to understand the assignment requirements and teachers’ expectations in the project. The teachers even directed the students to do peer-review and self-review based on these evaluation criteria to make constructive comments and feedback on each other’s writing. The students from the two schools progressively learned the essential components of academic writing including the development of logical arguments, the structure of well-connected paragraphs and syntactic sentences, the use of appropriate vocabularies, transitional words and correct grammar, the synthesis of research findings, the clarity of expressions and pragmatic meaning of the text, and the demonstration of critical thinking and analytical skills. These assessment tools positively trained the ELL students to make proper decisions and judgments when they were reflecting on authentic experiences and L2 writing with critical feedback. The critical reflection process adopted in the *Sister Class Project* successfully turned the ELL learners to be reflective individuals with three crucial qualities: open-mindedness, responsibility, and wholeheartedness in learning (Griffin, 2003).

Following the guidance of these evaluation criteria, a student from the *Natural resources and environmental problems* group expanded and revised her writing by synthesizing pertinent researched information, reflecting on the selected topic and prior experience, applying learned knowledge in authentic contexts, and solving the discussed problem with feasible solutions. Her revised draft was divided into different sections with precise headings and subheadings in a well-structured text. With the teacher’s explicit instruction of academic writing and the peers’ productive feedback, this student was able to produce a comprehensive, coherent text with a clear topic sentence highlighting the central argument or idea in each paragraph. In the section *Environmental problems*, she described the problems of air pollution, water pollution and waste pollution in the Canadian context with explanatory information and statistical findings she had researched. In the subsequent section *Practical solutions*, she came up with effective solutions for each pollution structuring her text in a well-balanced, parallel way. In the concluding section, she stressed the importance of the Kyoto Accord from a global sense, calling for genuine support and effort from the public to collaboratively save and protect the earth. This student’s strategic
planning of text structure and her presentation of arguments demonstrated a high level of critical thinking skills she has developed and employed throughout the project. The teachers emphasized in the writing rubric that critical thinking skills would focus on the students’ abilities to make fair, rational judgments and express their inner feelings. The student in this case was considered to be exceptionally critical (Level 4 in the writing rubric) as she reasonably argued that humans have been producing dreadful pollutions (with sufficient evidence from her research) for different inconsiderate purposes (with profound expression of her inner, sympathetic feelings to the ‘dying’ earth as well as the victims from natural disasters discussed in class), and hence should be responsible for making effort to reduce or eliminate those man-made environmental problems so as to preserve the world (with inclusive, concrete suggestions at the end of her text).

In short, the *Sister Class Project* offered the ELL students a chance to develop critical thinking skills fulfilling the major goals raised by Lau (2011) in their L2 learning: a) Critical thinking enhances language skills and presentation skills. The ELL students learned how to plan, research, and produce their project systematically that in turn helped them express and present their ideas clearly. They also improved their comprehension skills by analyzing the syntactic structure, logical meaning, and principal messages of different texts. b) Critical thinking promotes creativity. The ELL students learned how to provide a proper answer to their research question rather than brainstorming arbitrary new ideas to conclude their project. They learned how to select the best solutions to each problem they raised and modify them to make those ideas more relevant. c) Critical thinking supports self-reflection. The ELL students learned how to justify their decisions and reflect on their own values with the teachers’ guidance and assistance. The process of self-reflection and peer evaluation prepared the students for L2 improvement and success in their final project. d) Critical thinking generates new knowledge. The ELL students learned how to gather and integrate diverse sources of knowledge they have researched from the fast-changing global learning space. They also learned how to analyze different information and internalize it into valuable tools to solve problems and generate new knowledge. e) Critical thinking enlightens student empowerment and social democracy. The ELL students learned how to resolve contradictory opinions with a fair perspective, and work with their sister class peers by informing each other of their judgments and decisions about their final presentation. Only in this way could the students fully and equally engage in the project to enjoy shared rights and respect in a collaborative, supportive learning context.
6.5 Student Empowerment

Some keynote researchers in *Second Language Education* (e.g. Cummins, 2000; Guthrie, 2004; Rothstein, 2013; Wong Fillmore & Fillmore, 2012) have found that students who are at risk of underachievement in schools are generally stereotyped into one of these three categories: ELL learners, students from low socioeconomic status (SES) backgrounds, and students from socially marginalized communities. These educationally disadvantaged students include those immigrant students who are non-native speakers of English regardless of their length of residence in the dominant culture, and those minority students who are socially excluded from the mainstream. These students, who usually come from a low socioeconomic background, tend to be labelled as academically jeopardy or failure, and are therefore marginalized in the school system and the larger society.

Peterson and Bainbridge (2002) argue that literacy instruction and assessment are fundamentally social and political according to Bigelow’s claims: “All teaching is partisan. Whether we want to be, all teachers are political agents because we help to shape our students’ understandings of the larger society” (1990, p.445). The knowledge generated in the classroom may affect the power relations as well as social positioning of teachers and students, and may consequently shape students’ identities, values and beliefs. In this regard, teachers who are working with socially marginalized students need to re-frame their teaching and assessment by supporting those students to understand and perform four roles in literacy learning: as code-breakers, text participants, text users, and text analysts. “Teachers and students must go beyond the first three roles traditionally found in elementary classrooms, and focus increasingly on becoming text analysts. Being a text analyst means reading critically, or having conscious awareness of the language and idea systems…. Teachers and students take up the text analyst role by identifying stereotypical perspectives and recognizing the values inherent in the text.” (Peterson & Bainbridge, 2002, p.6-7). Recognizing the possible function of the teachers as political agents in education, the Sister Class Project cautiously redefined their role as facilitators in L2 learning, responsible for helping ELL students analyze the ideological perspective of a text or a social issue by positioning themselves outside that perspective and critically question it.
Drawing upon Cummins’ notions of coercive and collaborative power relations (1996), Goldstein (1999) proposes that the negotiation of identities in schools is central to students’ learning. “Identities are formed and negotiated through everyday interactions among teachers, students, and the communities the students belong to. Importantly, these interactions are never neutral. In varying degrees, they either reinforce ‘coercive relations of power’ (the exercise of power over people) or ‘promote collaborative relations of power’ (the creation of power with people)” (Goldstein, 1999, p.277-8). These two types of power relations represent extreme poles of teacher-student relationships that are basically determined by the pedagogical approaches adopted by teachers. Coercive relations of power may sow the seeds of discriminatory, unjust, unbalanced power struggles when teachers permit, either voluntarily or involuntarily, the subordination of minority students, or the manipulation of power by the majority students over the others in the classroom. On the other hand, collaborative relations of power may cultivate mutual understanding, productive learning, and social equity when teachers promote student empowerment by offering minority students substantial opportunities to express their thoughts and identify themselves.

The Sister Class Project reflected collaborative power relations both in the classroom and the online learning context in which the ELL students received mutual support, enjoyed positive intergroup cooperation, affirmed their identities and sense of efficacy, created power with their peers and teachers to make progressive changes of their social situation. The ELL students were supported through the inspirational instructional strategies highlighted in the Literacy Engagement Framework (Cummins, 2014), including: a) scaffolding meaning, b) connecting to students’ lives by activating background knowledge, and c) extending language use (Figure 3).
6.5.1 Scaffolding Meaning

The term *scaffolding* means the provision of instructional guidance and support that enable learners to complete academic tasks and achieve a high level of educational performance with success (Cummins & Persad, 2014). The two teachers in the *Sister Class Project* demonstrated huge effort on scaffolding the meaning of various learning materials to provide the ELL students with comprehensible input through the use of wide-ranging activities suggested by Cummins (2014) including multi-modal instructional tools, acting out meanings of different texts, interactive and collaborative tasks, explicit explanation of linguistic structures and discourse patterns, showcasing writing samples, and performance of students’ final projects. These scaffolding activities not only reinforced the ELL students’ cognitive engagement to develop long-term strategies for effective learning, but also enabled them to understand and use the academic language with the support of visual and graphic tools, and more importantly, the use of their L1 to clarify the learning content in both printed and electronic resources.

“I usually encourage my students to make guesses at the academic vocabularies, and ask questions, based on the content of the readings we have read, or the sentence we have learned from the readings. Every time we look at a new vocabulary item or a sentence structure, I use that approach. I also encourage the students to create a word bank to collect all the vocabularies we have looked at and explained together. So by the end of the term, they would have a long list of words in their word bank. I always encourage...
them to review the list for writing purposes. Whenever they are engaged in writings, I ask them to look at those words again and use the words in their writings. I encourage them to use conjunctions ‘before’ and ‘after’ to make a connection. Whenever they come across any sentences that they don’t understand, I guide them to use context clues and semantic clues. The students have their own language binder in which they can retrieve their word bank. They can put down the meaning of those vocabularies in their word bank with definitions we have discussed in class and information they have looked up from the Internet. When they encounter some complicated, difficult vocabularies, I let them use their L1 to discuss or clarify the meaning with those who come from the same background, or ask their parents for an explanation so that they may have something interesting to share with their family, of course in their own language, at home. I find that my ELL students are less apprehensive about learning new vocabularies. They are now more interested in using dense vocabularies than before. When I show them how they could improve the quality of writing by using higher-level vocabularies, they are all surprised and excited. I also notice that the students are able to identify whether the word is a noun, a verb, an adverb, an adjective, or even a conjunction by sharing writing samples on the projector in the classroom. The students are now learning effectively by putting what they have learned in class into real practice. I would say that they are doing much better now than they were sent to me at the beginning of the term.” (Teacher interview, Toronto School, 2005).

The overt instruction used by this teacher enabled the ELL students better understand the linguistic rules, grammatical structures, and semantic meaning of the target language which allowed them to produce more qualified academic writings. The teacher directed the ELL students to build and create their own word bank by asking them to explain the meaning they had learned in the textbook, helping them clarify the meaning with appropriate information they had researched from other sources, and inviting them to share the meaning they had learned from their parents or other family members. This knowledge enquiry and building process involved dynamic teachers-students and parents-children interactions which have brought incredible outcomes on student engagement in the project. More importantly, the teacher’s recognition and acknowledgement of the ELL students’ L1 was another signal of their academic success. The study demonstrated that the use of L1 as a supplementary tool could help the ELL students comprehend the meaning of both discrete vocabularies and holistic readings, and further recognized the values and potentials of these students who gradually felt more welcomed and respected in a multilingual classroom. In this regard, the ELL students were all encouraged to translate their identity texts from L2 to L1 with the help from their parents in order to be positively engaged in learning and feel proud of their own language and cultural background.
“What has been striking me is the two new immigrant students have made significant changes and progress in the project. Both of them were very silent and shy in class when they first arrived. Unlike other students, they always remained in their seats at the back of the classroom working on their own assignments and having zero interactions with others. But then when they were connected with their overseas partners, they became a lot more motivated and engaged. They were happy to talk to their peers in their L1, especially when they were confused with some concepts at the initial stage. They could get immediate support and prompt response from their group on the website to solve problems of their assignments or the larger project they were building altogether. I was thrilled to find that they were eager to do their research, actively participating in online discussions, and sharing their findings in class. They are now a lot more comfortable and confident in using their L2 in casual communications and in formal academic contexts.” (Teacher interview, Toronto School, 2005).

The immigrant ELL students, particularly the newcomers to Canada, were provided with sufficient comprehensible L2 input in different learning environments. On the one hand, they were exposed to the target language through various task-based activities enabling them to practice their L2 in authentic social settings. On the other hand, they were enlightened to place a strong value in their L1 to clarify meaning and enhance understanding in literacy learning. They were delighted to use their L1 and L2 to fulfill different learning goals both in the classroom and the online learning context. These two immigrant students, who reported that they came from low-income families and had no access to computers at home, were initially reluctant to interact with their teacher and peers in class, and therefore kept themselves in their comfort zone. With noticeable language barrier upon their arrival, they found it very difficult to catch up with the mainstream students and meet the minimum requirements of the school curriculum, and were hence labelled as passive learners by most educators in the school system. The Sister Class Project marked a milestone in the learning progress of these students by motivating them to learn L2 with accessible ICTs, engaging them in critical thinking and collaborative learning, and respecting their use of L1. These immigrant students ended up with huge success in their final project and literacy performance by claiming that “my background is no longer a weakness” (Student Reflection, Toronto School, 2005). The original obstacles from their socio-cultural and linguistic background have finally been removed. The school leaders, teachers, parents and students themselves were impressed not only by their identity text presentations, but also their transformation from being passive observers in an isolated circle to be active learners in a multicultural community.
6.5.2 Connecting Knowledge to Students’ Lives by Activating Prior Experience

Another promising instruction strategy proposed by the *Literacy Engagement Framework* (Cummins, 2014) is connecting knowledge to students’ lives by activating their prior experiences. Effective learning usually takes place when new input is integrated into the existing cognitive schemata of learners. ELL students’ background knowledge may provide them with the foundation for comprehending the meaning of texts as well as interpreting new information they receive from multiple sources (Cummins & Persad, 2014). For most ELL students, “much of their background knowledge is likely to be encoded in their L1. Thus, their L1 is directly relevant to the learning of L2. This implies that students should be encouraged to use their L1 to activate and extend their conceptual knowledge, [for example] by brainstorming in groups, writing in L1 as a stepping stone to writing in L2, carrying out Internet search in their L1 etc.” (Cummins & Persad, 2014, p.18). A research study examining the fundamental reasons of underachievement of international ELL students in Australia found that the learning difficulties of these students were mainly grounded in weaknesses in their prior learning experiences (Sawir, 2005). The HK teacher shared in the interview how she encouraged her students to scaffold their prior knowledge and connect it with their personal experiences in order to learn new knowledge and promote deep understanding of it:

“We had a unit about the *Ocean Park* in the English Language textbook. I chose to teach this unit in the computer lab to integrate it with some IT tools. I showed a software, which is actually a complimentary teaching material offered by the textbook publisher, to the students on the overhead projector. It seems that the students were brought to the Ocean theatre of the *Ocean Park* to watch a dolphin performance. I asked the students some questions about the show such as: What are the dolphins doing? How do the trainers lead the dolphins to dance? Have you ever seen a dolphin show like this? Can you describe your experience and thoughts about that trip? I also asked them to plan their own schedule of visiting various spots of the park. It is amazing that the students could even feed the dolphins with some fishes and design the motions of the characters on the computer screen. For example, they could make the trainer diving into the water to perform with the dolphins, or they could make the dolphins dance in different directions or positions. At the end of the lesson, I asked the students to write a journal describing their trip to the *Ocean Park*. I think this activity was very interesting because the students were able to control the screen to actually ‘experience’ the dolphin show and the feeding process rather than just imagining a trip to the theme park. The software allows the students to see the actual environment and pictures of the *Ocean Park* and to create their own story of their trip.” (Teacher interview, HK School, 2004).
The teacher continued to discuss how the activation of students’ meaningful experiences might facilitate their academic writing, and how the students might benefit from positive teacher-student interactions in promoting critical inquiry through collaborative scaffolding and sharing:

“If [the students] are asked to write something about their own experience, they may feel comfortable even if they do not have any substantial data on hand because they can recall their interesting memories and express their own thoughts. In this case, they don’t they feel they are being ‘forced’ to write something that they have limited knowledge in. Rather, they may enjoy writing a follow-up essay after visiting a place where they had great fun and happy memories, and enjoy sharing interesting stories with others in class.”

(Teacher interview, HK School, 2004).

This vivid example showed that the ELL learners were immensely engaged in the learning process when they were given a chance to express their personal feelings and connect conceptual knowledge with their prior experiences. The HK teacher introduced the ELL students an innovative software to activate their background knowledge to describe their previous trip to the Ocean Park, a well-known tourist spot in Hong Kong. With the support of the large projector screen and computers, the students felt that they were watching a real dolphin performance at the theme park. They were amazed to learn how to feed the dolphins and control the motions of these living creatures on the screen which largely aroused their interest to participate in the task-based activities designed by the teacher. The teacher reported that all students in class were excited to share their previous trip to the Ocean Park and connect it with the planned topic in their syllabus. The teacher tactfully associated this taught unit with the students’ selected topic on Travelling around the world. The students found those guided questions, in-depth discussions and personal sharing exceptionally helpful, and therefore actively expanded their discussions on the sister class forum and finally incorporated them into their identity text project. Surprisingly, the positive learning attitudes were also found in those relatively passive ELL students who became motivated to interact with others on a topic of common interest and use technologies to learn the target language. They were aware of the importance of using the academic language in class, but might switch to their L1 occasionally when they encountered difficulties in recalling the pronunciation or meaning of some vocabularies in L2. In this case, the implementation of new technologies and the proper use of students’ L1 considerably enhanced the empowerment of ELL students, particularly those at academic risk.
6.5.3 Extending Language Use

The Literacy Engagement Framework (Cummins, 2014) argues that learners’ knowledge of and control over the target language should be extended across the curriculum as they progress through the grades and are expected to read increasingly complex materials in the content areas of the curriculum. Students need to learn the complexity of the academic language which “reflects: a) the difficulty of the concepts that students are required to understand, b) the vocabulary load in content texts that include many low frequency and technical words that [they] almost never use in typical conversation, and c) increasingly sophisticated grammatical constructions (e.g. passive voice) and patterns of discourse that again are almost never used in everyday conversational contexts” (Cummins & Persad, 2014, p.18). In this subsequent learning stage, students are not only expected to read texts in the academic language, but also use it to internalize knowledge and write essays, journals, tests, and other forms of assignments. Students may learn more quickly and effectively when teachers focus on explicit integration of language and content by directing students to construct meaning through language in all subject matters across the curriculum.

The Sister Class Project provided evidence to support the claim that an online collaborative context can be a powerful and dynamic force for learning by activating students’ previous experiences and building on their existing skills to co-construct knowledge. The group working on Travelling around the world developed a creative, well-presented identity text introducing the famous attractions of Canada and Hong Kong. The sister class partners from this group wrote a brief introduction discussing the population, climate, history, and geographical features of their home countries by summarizing the information they had found on the Internet. Some of the new concepts such as: “special administrative region (SAR), “Basic Law”, “legal and social system” that a HK student posted on the discussion forum were difficult for her sister class partners to understand. The teachers took advantage of this teachable moment and asked the students to look up the meaning of those vocabularies from a dictionary or other online resources and write down the meaning with examples on their prescribed handouts. By sharing appropriate findings from the Internet (Appendix 13), the students effectively learned the colonial history of Hong Kong through an engaging discussion of the related terms such as ‘the British Empire’, ‘the First Opium War’, ‘military defense’, ‘China regained sovereignty’, ‘autonomy’ and so on. Similarly, the Toronto students were guided by their teacher to explain those vocabularies, both in their L1
and L2, in their word bank so that they might retrieve the file for later use in their project. The Toronto teacher expressed in an interview that, with the effort of relating the meaning of academic concepts with the ELL students’ social and life experiences, these students could learn new vocabularies in a meaningful way and develop deep understanding of the academic content enabling them to produce effective writing or literacy performance.

“Writing is a very personal thing. It shows someone’s inner feeling and inner thoughts. It shows a kid’s schemata of whatever he/she has learned, whether he/she is able to make connection with his or her previous experiences. And then he/she puts it into writing, using his or her language skills and ideas. Writing involves lots of planning, reading, researching, and thinking; so this is indeed a process of sharing personal feelings… We have made a very clear point to the kids that we value literacy skills, and we value the sense of responsibility of the students working as a team. We also emphasized the need to show respect to other people. We have to respect others’ comments and ability in writings and presentations. We don’t look down on people who are not native speakers. I think the students were learning the value that we have placed on their own and others’ culture and language, by bringing it to class, by writing in it, and enjoying using more than one language in class.” (Teacher interview, Toronto School, 2005).

The Sister Class Project offered the ELL students a platform to invest their identities in their writings in which they could demonstrate their learned knowledge, share their personal experiences, and express their inner thoughts and inner feelings. During the process of self-evaluation and peer evaluation, the students not only discovered the beauty of their home language and culture, but also learned how to appreciate others’ cultural traditions, heritage, beliefs and values. The ELL students significantly benefited from the process of empowerment in the project for it provided them with equal opportunities to participate in discussions and interact with their teachers to receive academic support and direct feedback online. Those students who initially appeared to be passive and invisible in class tended to feel more relaxed and comfortable to communicate with their peers and teacher in the online learning space. Some of them were surprisingly willing to take a leading role in cyberspace at a later stage of their group project. To sum up, collaborative teacher-student relationships in this study contributed to greater equity among students, particularly those who were excluded from the mainstream class, to develop positive learning attitudes for productive learning, knowledge co-construction, and educational prosperity.
6.6 Identity Formation

In addition to enhancing student empowerment, identity texts can also be a powerful tool enabling ELL students to develop positive identities with a strong value and respect of their home language, cultural background, social position, academic ability, religious beliefs, gender role, and other talents and skills. The Sister Class Project provided a broader context of pedagogy (Cummins & Early, 2011) for ELL students to invest their identities through meaning-making activities, use of dual languages in the learning process, integration of multimodal tools into the school curriculum, and parental support in their education. The teachers and the students alike reported that creating identity texts actively engaged the students in literacy learning and literacy performance, extensively helped them learn L2 and build up knowledge of different subject matter, and positively reinforced their identities, as illustrated in the following student interview:

“I used to be afraid of using my mother tongue in class even though our teacher allowed us to do so, because I’ve heard, before we came to Canada, that we might be punished if we spoke a language other than English or French. But then when I found out my classmates were using different languages in their discussions, in the forum, or even in their writings, I felt safe and happy to use my mother tongue, especially with the Hong Kong group because we all speak the same language, and they always share something about Hong Kong where I was born. I moved to Canada last summer, and I am still missing my home town, friends and family a lot. When my group talked about the [distinctive] places, festivals and features of Hong Kong, I remembered how we celebrated special occasions with our grandparents and relatives there. When I brought my project home, my parents helped me translate my writing to Chinese and found some of our family photos for the project. We spent a week doing that, and we had such good time sharing all these memories together.” (Student Interview, Toronto School, 2005).

The identity texts produced by group Travelling around the world (Appendix 14) demonstrated that the students were able to passionately express their innovative ideas to develop their own identities. The students worked enthusiastically on researching relevant materials of the popular attractions of their home countries from the Internet and then summarized the information in their own words. By creating an attractive layout of the travel booklet on the computer, the students were enchanted and proud to show the heritage and beauty of their culture. They were excited to share their own stories of visiting those attractions, and to incorporate appealing pictures taken either from the Internet or during their own trips. In this case, the students were
able to make meaning of the comprehensible input they could incorporate into the identity text project by scaffolding their prior experiences. “Creating a classroom environment where students feel safe, secure, and a sense of belonging will help reduce fear and anxiety. This is especially important for ELL [students] who may have recently immigrated under very stressful or traumatic conditions” (Curran, 2003, p.337).

Comprised of ELL students and immigrant students, the sister classes produced bilingual identity texts in their L1 (Chinese) and L2 (English). Respecting and valuing the mother tongue of ELL or immigrant students in their learning is an essential part of embracing an appreciative approach to diversity and developing the positive identities of these students (OECD, 2010). The students were delighted to use their mother tongue and cultural knowledge as valuable learning capitals to maximize their cognitive engagement and identity investment (Cummins, 2001). The Sister Class Project corrected the misconception of those immigrant students who believed that they would be penalized for using their L1 in school, and more importantly, it encouraged them to show their appreciation of their native language and culture, and re-affirm their personal identities. The Power-Point presentations created by the ELL students also served as a vehicle for them to introduce their topic, post their identity texts, demonstrate research and illustrations and so forth. These original, innovative works effectively enabled the students to establish their personal and cultural identities on the web (Wood, 2004).

Not only did the ELL students benefitted from the process of empowerment in the learning context with support of their L1, but their parents’ contributions were also acknowledged for their roles in their children’s education. The Sister Class Project invited the parents to take part in any/all stage(s) of the project they wanted, including brainstorming topics, learning the functions of the project website and other technological learning tools, researching relevant materials from different sources and sharing cultural stories and/or family stories with their children, helping their children translate identity texts from L2 to L1, proofreading and correcting the bilingual texts, and volunteering to help at the Literacy Fair in which their children presented their final project. These practical opportunities enabled the parents to play a supporting role in promoting their children’s academic success.
6.6.1 Parents as Collaborators
The parents were no longer excluded from their children’s education; rather, they had a better understanding of their children’s learning progress, behaviors and outcomes in school. They were welcomed to collaborate with their children through family sharing of cultural values and personal experiences that may enrich their children’s identity texts. This is particularly important for those parents, who were less educated or even illiterate, to maintain a close relationship with their children. In this regard, both of the ELL immigrant students and their parents were socially recognized and respected in the project, as one student said:

“My parents don’t speak English at home. My dad used to be a taxi driver back home, and my mom is staying home and taking care of me and my elder sister. My dad is now working as a security guard in a commercial building in Toronto. He works for long hours and needs to [take] night shifts so we can’t talk to him very often. We came to Canada seven months ago; still, we are speaking Urdu at home because this is the only language my mom can understand. My mom is always scared to talk to others, like our neighbors, on the street, and even my teachers in school because she doesn’t know English well. She can’t help with my homework so every time when I have questions, she asked me to turn to my sister. But sometimes my sister is not able to help because she is also a newcomer and going to an ESL class. When I told my mom we were allowed to use our mother tongue to do our project, she was so happy to help me write in our language when I [translated] the content to her, add details to our story about the festivals we celebrate in our home town, and look for family pictures to decorate our project. She is now excited to know more about my homework and school life.” (Student interview, Toronto School, 2005).

6.6.2 Parents as Facilitators
The parents no longer thought their L1 was insignificant or irrelevant in a multicultural community; rather, they were encouraged to support their children’s learning by discussing the school curriculum and producing the identity texts with their children in their native language. Most of the ELL students reported that they were happy to share their school projects and learning outcomes with their parents who encouraged them to appreciate the real benefits and power of their L1 in supporting their academic learning and identity development. They welcomed the language help, psychological support and personal sharing received from their parents. In this case, the ELL students and their parents could enjoy the process of identity negotiation by investing their linguistic features, cultural values and personal stories in the identity texts, as illustrated in a student interview:
“My parents always tell me to use only English in school so that I can succeed in my study and find a good job in the future. They keep saying that English is the most important language nowadays. When I asked my parents to read our project and the [dual] language texts, they were surprised to find the new words and details I was writing in both languages. They were interested in [exploring] the meaning of some hard words/phrases, and correcting my mistakes by looking up the words from a dictionary or the Internet together with me. For example, we spent the whole day talking about the meaning of ‘sovereignty’ and ‘democracy’ with different examples from UK, USA, Canada and Hong Kong we found on the computer. It is a lot easier to understand and discuss these new terms first in Chinese, and explain in English later in my project.” (Student interview, HK School, 2004).

6.6.3 Parents as Interactive Audience

The parents were no longer passive recipients of educational news from the school and the community; rather, they were invited to attend, volunteer, and help at the Literacy Fair organized by the teachers at the school sites so that they could share their children’s academic accomplishment, provide useful feedback to motivate their children to make productive progress, and support their children achieve greater success in their learning and future career. As one teacher stated, active parental involvement contributed to making students’ literacy learning process more rewarding and fruitful:

“The parents were very enthusiastic in their children’s final presentations. They were keen to ask questions and comment each presentation which was certainly great encouragement for our students. Some parents even volunteered to come in to videotape the Literacy Fair for us. They have definitely showed their kids that they supported this kind of activity here. This project was not just an activity, but a huge educational accomplishment based on literacy, based on collaboration between teachers, students, distant partners and parents, and based on the knowledge we have learned together. That would definitely motivate the students to put greater effort in similar activities and further study in language learning, and you know, in cultural activities, in the coming future.” (Teacher interview, Toronto School, 2005).

As a result, parents, generally considered be the first teachers in their children’s lives, may continue to bring incentive and motivation for their children’s academic learning and achievement. More importantly, parents may also be the role models for their children by showing pride and appreciation for their own language and culture, which will in turn shape their identities in positive ways. This is particularly pertinent for those immigrant parents who have been negligible or invisible in their children’s education due to language barriers or culture shock.
challenges in an English-dominant society. Those immigrant parents in Canada may feel themselves suffering from a hyphenated identity (Yi, 2002). The ‘hyphen’ means a combination of two cultural identities and an obligation to fulfill the expectations of both identities in the new country. Yi (2002) explains that her hyphenated identity has made her an outsider in both cultures because she could neither completely assimilate to the new culture nor conform the constraints of her native culture. This painful struggle for identity has put her in a cultural dilemma in which she cannot find any root or sense of belonging in either culture, finally leading her to splitting personality between the two poles of her cultural identities.

In her ground-breaking critical ethnography, Goldstein (1999) documented and recounted an identity text project of a group of Chinese-Canadian students and their high school art teacher, Leslie Edgars, who attempted to “open small doors” to help her students succeed and negotiate their identities in Toronto that has witnessed a wave of immigrants from Hong Kong during the 1990s. Leslie Edgars believed that opening small doors for ELL students in the classroom would enable them to open the bigger door for their future. In Leslie’s senior art class, students were asked to begin with a painting assignment Journey to acceptance followed by a written reflection in their art journals during the whole painting process. A Canadian-born Chinese student, Evelyn Yeung, was often identified as an immigrant because she appeared like a Chinese rather than a typical member from the mainstream. She felt “disgraced” and frustrated that she was unable to read and write in her L1, and hence considered herself as “illiterate” in Chinese. Leslie Edgars suggested Evelyn should consider designing a painting that could express how she felt about the Chinese language and identity. She also suggested Evelyn should learn how to write Chinese from several of her classmates who were born and educated in Hong Kong. Regardless of the improper writing of the Chinese strokes at the beginning of her learning process, Evelyn was delighted to remember her childhood experience of writing in Chinese with the black ink and traditional writing brushes. She was surprised to find that when she was using these tools to write Chinese characters, everyone else in the class wanted to be part of the process and was amazed by her writing. Evelyn’s L1 learning positively developed her identity by allowing her to actively interact with and learn from others in school, and challenge coercive power relations and traditional roles of authority in conservative classrooms (Goldstein & Lam, 1998).
In a similar vein, the *Sister Class Project* opened small doors for those ELL students in Canada who were struggling to find acceptance in their native culture and the new culture, and for those ELL students in Hong Kong who were struggling to improve their L2 literacy skills either through an English-only instructional method or an integrated bilingual approach. Like Evelyn Yeung in Goldstein’s study (1999), a number of Chinese-Canadian students in this project have been struggling with their *hyphenated identity* (Yi, 2002) since they were born and raised in Canada, because they were neither fully accepted by the Canadian culture nor the Chinese culture. They used to feel marginalized or excluded in the classroom where they were unwilling to express their thoughts in L1 or display their identities in front of others from the majority culture. Even in some cultural activities such as the *Multicultural Talent Night* and the *Annual Variety Show*, these ELL students were still dispassionate and reluctant to share cultural practices and linguistic values which might be suppressed involuntarily or subconsciously in the school contexts. They ended up losing their native language and culture, partially or entirely, in their identity development process. The cultural dilemma faced by these ELL students was worsened when they found that they were never recognized as “one of them” in the majority group although they had been using English as the only language in all social settings, and have been assimilating themselves with Canadian culture. With the close connections of two sister classes, the ELL students reported that they felt relaxed and eager to exchange their cultural and academic ideas with their distant peers, especially cultural topics such as *celebration of traditional festivals*, *travelling around the world*, and *visiting my country* etc. The students were motivated to share their stories, family pictures taken during special occasions or trips, and reflection journals with their sister class partners and teachers in a highly interactive mode.

“At the beginning of this project, I did not actually believe that our teacher allowed us to speak our language in class, and even to complete our project in both languages. She asked my friends from the HK group to talk to me in Cantonese and then I could teach them English vocabularies from my word bank and worksheets. [This was] the first time I felt the welcoming power of my language after stopped using it for so many years in school. I was no longer frightened, or I would say I became comfortable, to speak my language in class, because I found that my friends from other backgrounds were paying so much attention to my presentation of our bilingual texts, in both English and Chinese. My parents even brought some mooncakes to share our cultural story and food of the Mid-Autumn festival that I presented at the Literacy Fair. Everyone and our teacher enjoyed it a lot!” (Student Reflection, Toronto School, 2005).
This immigrant student expressed her inner feelings in the reflection journal by using the words or phrases ‘welcoming power’, ‘comfortable’ and ‘no longer scared’ which were contrasted with her initial struggle with traditional relations of authority in the classroom she had experienced in the past. These inner thoughts reflected her negotiation of identity by recognizing the power of her own language and cultural values, and determining how she felt about herself in the classroom and in the multicultural society. In producing the identity text project, the teachers strongly supported the ELL students by offering them a flexible, friendly learning space in which they could negotiate their identities through collaborative relations of power, and actively learn their language and cultural knowledge from their families and sister class partners. In their identity search through L1, culture, heritage, adjustment and acceptance, most ELL students successfully overcame the discomfort and anxieties of their hyphenated identity, and finally developed a vibrant, well-defined identity by embracing the beautiful features of both cultures.
Chapter 7
Conclusion: Implications and Future Directions

7.1 Interpreting the Sister Class Project Findings as a Dialogue between Theory and Practice

The thesis has demonstrated the relevance of multiliteracies and the creation of identity texts in schools and out-of-school contexts. This *Sister Class Project* represented a promising way of supporting ELL students and making learning meaningful for them. Although the study did not push to implement a *transformative pedagogy* (Cummins, 2001) that aims to serve all students, particularly those from low income families or marginalized groups, it did engage ELL students in a *social constructivist pedagogy* ensuring that these students could be equally supported in academic learning and would not be left out in the school system. It opened up new possibilities and new opportunities for pedagogical changes and knowledge mobilization by claiming: 1) Literacy instruction should scaffold learners’ previous knowledge and experiences to support academic learning. 2) Literacy instruction should provide learners with meaningful comprehensible input to support academic production. 3) Literacy instruction should affirm learners’ intellectual, cultural and personal identities in the academic and social settings. 4) Literacy instruction should empower learners in the learning process by deepening and extending their understanding of the academic content and target language across the curriculum. 5) Literacy instruction should engage learners in active, multiple literacy practices, in both L1 and L2, to ensure high level of performance and produce highly qualified academic works.

The *Sister Class Project* displayed a typical pattern of the *multiliteracies pedagogy*, which offers new educational options literacy teaching and learning, through the four components of the *Multiliteracies Framework* (New London Group, 2000). **a) Situated Practice:** To provide the ELL students with ample opportunities to activate their previous knowledge and be immersed in meaningful experience, the participating teachers encouraged the students to read extensively in their L1 and L2, in various forms and from different sources, to relate textual meanings to their prior experiences and to improve their biliteracy skills. **b) Overt Instruction:** The teachers explicitly taught the ELL students linguistic rules and conventions of L2, and made them aware of different linguistic patterns, forms, and genres by reading different types of materials, such as
c) **Critical Framing:** The ELL students were trained how to critically analyze the texts, stories, and personal reflections they have read by discussing the theme, purpose, message, perspective, and context of each material with their teachers, classmates and distant peers in relation to their social and cultural relevance. 

d) **Transformed Practice:** The ELL students were guided to apply the learned concepts, vocabularies and knowledge they have learned from the textbooks and online resources in their identity texts as well as daily activities to reproduce other interesting literacy materials for their own purposes. Functioning as an *amplifier* to promote identity investment on part of the ELL students (Cummins, Bismilla, Chow, Cohen, Giampapa, Leoni, Sandhu & Sastri, 2005), the project website was found to be a powerful source of validation for these students who were truly proud of sharing their native cultural and linguistic experiences in the diversified school setting. Literacy educators therefore need to carefully consider how ELL students may use bilingual identity texts as cultural capitals to develop their personal identities and construct new social positions for themselves (Alvermann & Reinking, 2003).

Equally important, the *Sister Class Project* demonstrated an application of the three focus areas suggested by the *Academic Expertise Framework* (Cummins, 2001).  

a) **Focus on Meaning:** The teacher provided the ELL students with sufficient authentic, comprehensible input in the target language both in the classroom and online learning context by activating the students’ cognitive schemata to relate textual and instructional meaning to their prior experiences. The discussion on the *Ocean Park trip* (with the support of technological device to control a ‘dolphin performance’ on a computer screen) exemplified the effectiveness of connecting the students’ meaningful experience and academic learning, and the striking benefit of positive teacher-student interactions in promoting critical inquiry through collaborative scaffolding and sharing. 

b) **Focus on Language:** The teachers paid attention to explicit modeling of academic language forms and demonstration of the rules of using the target language in content instruction to allow the ELL students to fully understand the perspective of the writer(s) of each text and the underlying message of it. The construction of word banks, explanation and practice of linguistic rules in L2, and task-based activities on syntactic structure and lexical meaning conducted in the classroom and computer-aided environment fostered the ELL students’ critical inquiry, enabling them to develop critical language awareness to further explore the relationship between language and power, and finally strengthen their sense of identity. 

c) **Focus on Use:** The ELL students were
guided by both of their teachers and parents to generate new knowledge by applying the information and skills they have received from the learning spheres into their social lives. The teachers showed the students how the meaning of a particular text could be applied in multiple contexts. Meanwhile, the parents showed their children how their L1 and cultural values could be used to understand the meaning of new concepts in L2, and to look at the world from a critical perspective that would in turn support their academic learning. These practices of active language use greatly facilitated the linguistic growth, cognitive development, and identity construction among the ELL students who became more aware of their purposes, plans and expectations in literacy learning. All in all, the teachers, the ELL students and their parents in this study viewed themselves as active designers of textual meanings and active participants of social activities promoting educational and social success for these students.

7.2 The Sister Class Project as a Student-centered and Student-controlled Approach

The Sister Class Project emphasized its flexible approach of promoting literacy learning and knowledge generation with minimum or no interruption to the school curriculum and classroom routines. Throughout the project, the teachers and the students were invited to contribute their ideas from the initial stage of brainstorming topics and planning an outline of their identity texts, to the later stages of researching information from multiple sources, exchanging ideas with distant partners, relating the project goals with academic texts, sharing project progress in class, critically reflecting on their own work and others’ projects, and to the final stage of presenting their identity text project in the Literacy Fair they have keenly assisted to coordinate. At each stage, the students were given adequate choices and control to make decisions about the topic, tasks, content, and materials they wanted to use in their final project: First, the teachers allowed the students to choose their sister class group and a topic in which they had interest. The teachers then generated a topic list based on the students’ brainstormed ideas and made a connection of each topic with the textbook units. Second, the teachers provided the students with plentiful choices of chapter books, references, or related materials from the school library, classroom book club, and the Internet to guide the students to research information for their project. Third, the teachers designed interesting task-based activities integrating texts of diverse genre with formal instruction. Those activities again offered the students choices to select which chapters to read,
which paragraphs to summarize, and which articles to reflect on. Fourth, the teachers gave the students choices to select an appealing template from PowerPoint or other ICT devices to design their identity text project by incorporating visual, audio, graphic, or multimodal materials, thereby facilitating their production of high-quality academic products in which they could freely invest their identities. Finally, the teachers encouraged the students to choose their presentation format, the guest audience they wanted to invite, and the way of showcasing their final product (i.e. on a DVD they could send to families and friends overseas, on the school website as a role model to inspire other students, and/or on the project website that would be disseminated and broadcasted to a wider audience in out-of-school contexts).

In this regard, the teachers worked closely with the students to develop a student-centered and student-controlled curriculum offering the students great flexibility and incentive in the learning process. ELL students were no longer invisible or inactive in the multicultural classroom. They could now enjoy the right, privilege, authority and ownership of their learning and academic outcomes. “With minor forms of ownership over their literacy, students dig deeper for meaning, monitor their understanding, and express their newfound knowledge more elaborately than do students without these choices and decisions about their learning” (Guthrie, 2004, p.12). When ELL students take ownership of their learning, they contentedly invest their identities in learning outcomes, and this is how active learning takes place (Cummins, Bismilla, Chow, Cohen, Giampapa, Leoni, Sandhu & Sastri, 2005). Consequently, these ELL students may find the hope of transforming themselves from the isolated, outer circle to the more inclusive, inner circle to reach out academic and social success by playing multiple roles in their learning.

7.2.1 Students as Authors
The ELL students in the study enjoyed writing their own stories and co-authoring the identity text project on computers. They had full control of their writing content and expression of personal views that were closely connected with their pre-existing experiences and the course themes. The power of authorship further confirmed the students’ decision to choose to use their real name, instead of any pseudonym, throughout the study because they were proud to see their name on their identity text project published on the school showcase center and the project website. With the help of their parents in producing dual-language texts, the students showed genuine appreciation for their cultural heritage and invested their cultural identities in the project.
By welcoming ELL student’s home language, the schools supported the flow of knowledge, ideas, and feelings between home and schools and across languages (Cummins, Bismilla, Chow, Cohen, Giampapa, Leoni, Sandhu & Sastri, 2005), which in turn promoted the biliteracy development and identity construction of these students. ELL students’ identities could be expanded by writing in their own language and sharing their cultural beliefs in a school project.

7.2.2 Students as Teachers
The ELL students were excited to co-design a flexible curriculum with a wide range of topics, assignment formats, project timeline, and peer-evaluation criteria with their teachers. In the virtual learning environment, the students enjoyed playing a teaching role by taking initiative to invite their distant partners to discuss a taught subject or work together on a small assignment, clarifying and explaining academic terms based on their research or personal understanding, and providing feedback to peers with concrete suggestions or solutions. In the classroom context, the students continued to work as dedicated teachers by guiding others who had limited computer skills to do Internet searches, participate in online discussions, and produce electronic texts on the school computers. This persistent collaboration between teacher and students, and among students in both contexts, actively engaged them in their learning process. Rather than imposing a top-down curriculum with approved syllabus, textbooks, lesson plans and teaching materials, this study allowed the students to enjoy learning in an open, student-controlled program in which they could freely engage multiple forms of learning, address the subject matter, and express their own interests and topics of concerns (Kellner, 1998).

7.2.3 Students as Designers
The students in the study were supported to use multiple learning resources and tools to enhance their literacy learning and create their literacy project. For example, they were encouraged to contribute to a large brainstorming board which was standing at an accessible spot in the classroom so that they could save and share all the relevant ideas under each listed topic. They were also asked to enrich the content of their identity text project with their own illustrations, family pictures and/or innovative designs of their electronic presentation format. The students deeply enjoyed the ownership and the designing process of their bilingual identity texts incorporated with interesting clip art, personal pictures, creative drawings and other multimodal resources. In this case, the power of ICTs was strengthened enabling the ELL students to
establish their personal and cultural identities on the web by expanding and scaffolding their originality, native language, cultural knowledge, prior experiences, and valuable learning capitals to maximize their cognitive development and identity investment in a dynamic learning context. The students were therefore considered as “not only active agents in creating a rich learning environment by writing their own texts, but also by realizing that they can incorporate the texts [in an innovative fashion]… In this way, they seize opportunities for overt negotiation about the classroom curriculum and become responsible members of the classroom community by being accountable for the learning content” (Legutke, 2005, p.144).

7.2.4 Students as Performers
The students were found eager and delighted to share their identity text project at the Literacy Fair at which they gave a presentation with confidence and great success to a wide audience from the school, their families, and the community. They immersed themselves fully in the performance which truly reflected their personal value, identities, and learning experiences that they were eager to display. Some ELL students even dressed up in their traditional clothing to present on a cultural topic at the Literacy Fair. This cultural form of performance and representation enabled the ELL students to express their intellectual excitement, personal affirmation and identity investment in an academic setting. The audience’ appreciative applause reaffirmed the students’ pride in the project that was finally published in a digital book format and showcased on the project website. The students were provided with a DVD and a link of the project website so that they could keep sharing their work with overseas friends and relatives to celebrate their identity acknowledgement and academic accomplishment.

7.3 Pedagogical Implications
The educational benefits of the Sister Class Project were well received by the majority of the participants who found this experience intrinsically interesting, motivating and rewarding. The project suggested that students’ literacy engagement can be derived from having the experience of authoring intellectual work, taking ownership of their creative project, and sharing their final product with audience within and outside the school contexts (Ng, 2011). To further explore the potentials of the multiliteracies approach and create greater chances for ELL students to succeed in literacy learning, the roles of the participants need to be critically redefined and reshaped.
7.3.1 Role of Literacy Educators/ Teachers

Literacy teachers are facing acute challenges to transform their traditional instruction to a new pedagogy relevant to the globalized economy and the changing educational system. They need to mediate between the print-based curriculum and the multiliteracies approach, and between the opinions of the majority students and the voices of the minorities. Rather than dominating or controlling students’ learning process in class, teachers tend to work as educational mediators by guiding students to take ownership and control of their learning and opening up spaces for “the marginalized to speak, write, or read… so that the voicing of [these students] may transform both their lives and the social system that excludes them” (Pennycook, 2001, p.101).

Adjusting their conceptual expectations and approaches, teachers may better recognize and meet the conditions of effective learning to support their students to fulfill their learning goals, deepen their understanding, and achieve greater success in the classroom and out-of-school contexts. They may consider employing such instructional strategies as: a) engaging prior understanding and background knowledge, b) integrating factual knowledge with theoretical framework to foster deep understanding, c) asking questions relevant to students’ life experience, d) searching for information from multiple sources, e) summarizing learning materials and analyzing different perspectives, f) designing and presenting products through multimodal devices, and g) supporting students to take active control over their learning process (Bransford, Brown & Cocking, 2000). With these strategies, students can learn the target language in an academic context through modeling, scaffolding and guided practice. In out-of-school settings, parents may demonstrate to their children how their background knowledge can scaffold L2 development. In the classroom or online learning context, teachers may gradually release or shift responsibilities to students in the learning process enabling them to become self-directed learners. As a result, students may intellectually grow in knowledge, learning strategies, motivation, and social interactions that effectively facilitate their academic work. Teachers should always remember their ultimate instructional goal: “We need to take our destiny in our own hands by re-envisioning literacy learning on a new scale. We should dare to design instruction that can enable students to expand their engagement… With firm command of public knowledge about teaching literacy, the spotlight on the policy stage in education will fall on us” (Guthrie, 2004, p.26).
7.3.2 Role of Literacy Learners

Literacy learners are encouraged to play a leading role as active authors, designers and performers in their learning process, enabling them to see learning as an essential, enjoyable part of their lives rather than an obligated commitment. Only in this way can their inherent talents and academic strengths be maximized. They may sometimes reverse positions with their teachers who generally play the central role in schools, because students tend to come to school more literate than their teachers in the multiliteracies era (Chandler-Olcott & Mahar, 2003). “Skilled teachers will take advantage of this by constructing contexts for learning in which students who possess multiliteracies are valued and are supported in sharing their expertise with others. Instead of being the single source for all literacy knowledge, teachers will become orchestrators of literacy learning environments, where members of a classroom community exchange new literacies that each has discovered” (Leu, Kinzer, Coiro & Cammack, 2004, p.22).

7.3.3 Role of Parents

Parents are encouraged to play a visible role in their children’s literacy education in order to develop a critical orientation of multiliteracies. Parents may support their children to learn the target language by using their native language to explain difficult concepts and share cultural heritages or family traditions, making meaning of textual and multimodal materials by connecting it with prior knowledge, and critically analyzing power relations and social positions they experience in the multicultural society. This supportive, engaging role of parents may greatly motivate struggling ELL learners, and their collaborative involvements may effectively enhance their children’s literacy development and overall academic performance (Baker, 2003).

7.4 Future Directions

The Sister Class Project was an attempt to “open a small door” for ELL students to challenge the one-size-fits-all curriculum and the deep-rooted coercive power relations in transmission classrooms. The productive learning process and positive learning outcomes of the ELL students in this project confirmed that L2 learners can be better prepared to succeed in the academic world and the globalized word at large when they are fully engaged in and take active control of their learning. These students’ knowledge generation and identity investment can be further enhanced when the power of ICTs is harnessed to connect them with sister classes in different
linguistic, cultural, and geographical contexts. “Students’ own identities can be expanded when they have to define aspects of their own reality to present to the sister class and when this reality is reflected to them through discussion and project collaboration. Literacy is expanded in the process of carrying out joint project, [because] students read much more and write much more than they are in an isolated, contained, non-communicative classroom situation” (Cummins, 2005, p.123). Collaborative power relations can also be extended from classrooms to online learning spaces through conducting collaborative inquiry, supporting intellectual development and promoting educational empowerment.

SLE research needs to continue to explore new ways of negotiation to redefine the roles of teachers and learners, the process of learning, and the outcomes of new pedagogies. “Constructing knowledge on the basis of students’ experience within a community of dialogic inquiry in the classroom allows the widening of scaffolding and the integration of everyday knowledge into the process of learning. As regards pedagogy, the sister class presents an opportunity for discussing the possibility of extending constructivist programmes into transformative ones” (Skourtous, 2002, p.94). This study exemplified how a theoretical constructivist approach can be effectively applied and utilized in real classroom practice. By reshaping their roles in the classroom and the online learning environment, literacy teachers may appreciate the new pedagogical option of integrating print-based curriculum with multiliteracies practices, through sister class connections, to foster their students’ academic learning and identity formation, as well as to expand their own professional development and reaffirm their facilitating role in the academic contexts. Despite the fact that the multiliteracies approach has been advocated for about two decades, sister class learning still needs nourishment to grow. SLE researchers may consider conducting sister class projects through critical connections (Anderson & Macleroy, 2016), at both local and international levels, to achieve such pedagogical goals as collaborative learning of ELL students, collaborative teaching of ELL instructors, and student empowerment in globalized communities as new research directions.

The study demonstrated that ELL students’ voices can be widely heard and their roles can be better recognized via the creation of identity texts which value and acknowledge their imaginations, pre-existing knowledge, linguistic and cultural assets, creative work, and the full variety of the representational forms they choose to display and perform in the learning space orchestrated by their teachers. In this regard, identity texts are not biased instructional tools
because we are not encouraging teachers to “construct” a legitimate learning space to push students to disclose their identities through academic work or to infuse students’ work with teachers’ personal experiences, thoughts or opinions. What teachers need to “construct” is an open pedagogical space in which students can freely and actively bring in their cultural values, linguistic resources and prior learning to invest their own identities and take full control of their own work. Identity texts can therefore successfully promote cognitive engagement and identity construction of ELL students whose inner thoughts can be expressed and personal values can be respected. They are no longer forced to assimilate into the majority culture by giving up their own identities, or regarded as “outsiders” or “nobodies” who may be struggling with the labels ascribed politically, socially and culturally by the dominant group. They can now enjoy the true benefits and potentials of their background knowledge and personal affirmation to construct knowledge and art and share their intellectual work with a wide audience, which can in turn scaffold their access to greater personal and academic success.

Technology can go beyond information transmission as recent research has proved that it can maximize students’ learning potentials, and embrace social construction of knowledge and individual acquisition (Gabriel, Campbell, Wiebe, MacDonald & McAuley, 2012). Technology has developed and advanced far beyond where it was when this study was carried out. The positive outcomes and successful education process achieved by the Sister Class Project are not attributed to technology itself, but the pedagogy it effectively adopted by engaging ELL students to learn academic and authentic input of L2, gain access to content knowledge and skills, and develop critical thinking skills in the learning process. The study restated the need for a multiliteracies approach advocating positive attitudes to welcome multiple literacy forms and all possible instructional resources to promote literacy learning. It suggested that the implementation of the multiliteracies approach is not intended to replace the traditional, print-based approach which may still be the central focus of formal instruction; but rather, it is now time for policymakers, administrators and teachers to consider integrating ICTs into the existing curriculum to make literacy education more effective and promising. When educational leaders genuinely understand the new directions of literacy education and schools fully support teachers’ innovative teaching, multiliteracies pedagogy can open a bigger door to reassure educational and social success for all students.
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Appendix 1

A Table of e-terms Associated with Language and Literacy

*(Bodomo & Lee, 2001)*

<table>
<thead>
<tr>
<th>e-book and e-book reader: an e-book is a book presented in electronic form to be read primarily on a screen. It may provide interactivity through dynamic links, quizzes, or simulations. An e-book reader is a device, which may be in the form of a simulated book with two foldout screens, for viewing e-books.</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-classroom: an online learning environment</td>
</tr>
<tr>
<td>e-course: a computerized course mediated by the use of the internet</td>
</tr>
<tr>
<td>e-dictionary: dictionary which is made available online such as the online Oxford English Dictionary (<a href="http://www.oed.com">http://www.oed.com</a>).</td>
</tr>
<tr>
<td>e-glossary: (1) glossary of technology/internet–related terms (2) an online glossary of terms of any field</td>
</tr>
<tr>
<td>e-journals: journals which can be accessed and read online</td>
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<tr>
<td>e-learning: learning through the use of internet-based resources such as web-based course tools, online courses…etc.</td>
</tr>
<tr>
<td>e-library: Internet-based library that provides full-text, online access to eBooks of reference (e.g. netLibrary)</td>
</tr>
<tr>
<td>e-mail: Electronic mail is the Internet service most widely used. By sending an email, a file is created that will be transmitted and delivered to the electronic mailbox of the person you address. Can also be used to transfer files containing other information such as documents, programs and multi-media data. (<a href="http://www.hcgrp.com/eGlossary/eglossary.html">http://www.hcgrp.com/eGlossary/eglossary.html</a>)</td>
</tr>
<tr>
<td>e-publishing: electronic publishing, the act of making publication available online</td>
</tr>
<tr>
<td>e-quiz: on-line exercises to test students’ comprehension of a lesson or course.</td>
</tr>
<tr>
<td>e-text: a text which is published online</td>
</tr>
<tr>
<td>e-theses: electronic theses, theses which are published online</td>
</tr>
<tr>
<td>e-translator: an online tool for translation</td>
</tr>
<tr>
<td>e-University: a tertiary institution which is distinctive from normal university that all the teaching and learning are internet-based.</td>
</tr>
<tr>
<td>e-zine: Online publications in the form of newsletters or magazines that are allow for a new way for communication and interaction to occur on the Internet. e.g. <a href="http://www.salon.com">www.salon.com</a>; <a href="http://www.hcgrp.com/eGlossary/eglossary.html">http://www.hcgrp.com/eGlossary/eglossary.html</a></td>
</tr>
</tbody>
</table>
## Appendix 2

### Common Acronyms in Emails and Text Messaging

*(modified from Bodomo & Lee, 2001)*

<table>
<thead>
<tr>
<th>Online expressions</th>
<th>Original expressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ar/r</td>
<td>Are</td>
</tr>
<tr>
<td>Asap</td>
<td>As soon as possible</td>
</tr>
<tr>
<td>Bcoz/coz/cos</td>
<td>Because/ 'cause</td>
</tr>
<tr>
<td>b4/be4</td>
<td>Before</td>
</tr>
<tr>
<td>bb/bi bi/bi</td>
<td>Bye bye</td>
</tr>
<tr>
<td>BTW</td>
<td>By the way</td>
</tr>
<tr>
<td>Cu</td>
<td>See you</td>
</tr>
<tr>
<td>ic/oic</td>
<td>I see/ oh I see.</td>
</tr>
<tr>
<td>I dunno</td>
<td>I don’t know</td>
</tr>
<tr>
<td>Thx</td>
<td>Thanks</td>
</tr>
<tr>
<td>TTUL</td>
<td>Talk to you later</td>
</tr>
<tr>
<td>u/ur</td>
<td>You/Your</td>
</tr>
<tr>
<td>Wt</td>
<td>What</td>
</tr>
<tr>
<td>Y</td>
<td>Yes</td>
</tr>
<tr>
<td>Hm ...../ Mm .....</td>
<td>Hesitation</td>
</tr>
<tr>
<td>Where ???? /Really ????</td>
<td>Curiosity or suspicion</td>
</tr>
<tr>
<td>Ha !?</td>
<td>Surprise and doubts</td>
</tr>
<tr>
<td>: ) or :-)</td>
<td>Happiness, sarcasm, or joke</td>
</tr>
<tr>
<td>: ( or :-(</td>
<td>Unhappiness</td>
</tr>
<tr>
<td>: Q or :-Q</td>
<td>Confusion</td>
</tr>
<tr>
<td>: S or :-S</td>
<td>Expresses incoherence or loss of words</td>
</tr>
<tr>
<td>: @ or :-@</td>
<td>Shock or screaming</td>
</tr>
<tr>
<td>: O or :-O</td>
<td>Indicates surprise, yelling or realization of an error (&quot;uh oh!&quot;)</td>
</tr>
</tbody>
</table>
Appendix 3

Project Topics and Group List

1) Customs and traditions:
   ▪ Special events and ceremonies
   ▪ E.g. baby shower, birthday, wedding, religious ceremonies etc.

2) Festivals and food:
   ▪ How do you and your culture celebrate different festivals?
   ▪ E.g. New Year, Christmas, Easter, Thanksgiving, Canada Day, Mid-Autumn festival, Halloweens etc.
   ▪ Specific food in different festivals
   ▪ Special recipes and cuisines

3) Travel:
   ▪ Favorite traveling spots of your home country
   ▪ History and features of the traveling spots (e.g. sight-seeing, shopping, dinning etc.)
   ▪ Unforgettable journey (to anywhere of the world)

4) Popular culture:
   ▪ Movies/TV (recommendation of good movies or TV shows)
   ▪ Fashion
   ▪ Music (e.g. rap, pop songs, classics, folk songs)
   ▪ Dance (e.g. hip hop, modern dance, line dance)

5) Natural resources and environmental problems
   ▪ Environmental problems in your country (e.g. various kinds of pollution)
   ▪ Natural resources available in your country (How can we make use of those resources to build a better community and a better world?)
   ▪ Environmental campaigns (e.g. recycling, energy saving events, Clean HK campaign etc.)

6) Education:
   ▪ Learning English in Hong Kong/ Canada
   ▪ Comparing educational curriculum and teaching approaches of Hong Kong and Canada (e.g. class structures, educational goals)
   ▪ Students’ participation and performance in class
   ▪ Students’ learning attitudes and behaviors
   ▪ School life (e.g. school activities, extra-curricular activities etc.)
7) Impact of computers and multi-media:
   - Use of the Internet/ World Wide Web at home, in school, and in the community
   - Influential computer software (Why do you think the software is important?)
   - Online conversations (ex. MSN, ICQ etc.)
   - Web learning resources (How do you make use of those resources?)

8) Future leaders:
   - What are the moral and ethical values necessary to be cultivated among young people?
   - How can teachers and parents help students develop good characters and personalities?
   - How can students become successful future leaders and contribute to society?
   - How can we educate the next generations to become promising future leaders?

9) Leisure and entertainment:
   - Hobbies
   - Favorite recreational activities for young people
   - Recommendation of good recreational places in your country

10) Games and sports
    - Olympics
    - E.g. basketball, soccer, badminton etc.
    - Popular games or outdoor activities and their impact on young people

11) Childhood dreams
    - Childhood games or toys
    - Fairy tales of your own culture
    - Childhood dreams or fantasy (Have those dreams come true?)

12) Making friends overseas (writing to pen pals or relatives/friends abroad)
    - How did you meet your pen pals?
    - What do you usually share with your pen pals?
    - Why do you think it is worth writing to pen pals?
    - What have you learned or benefited from writing to pen pals?

13) Immigration
    - True immigration stories/ cases (stories or your own, parents, relatives or friends)
    - Objectives, difficulties, needs, and expectations of immigrants
    - Differences between home country and the new country
    - Support from the government, school, and the community
Appendix 4

**Guided questions for producing cultural newsletters**

**Group 1 & 2: Festivals and food**
- Which festival would you like to focus on in your project (e.g. Christmas, New Year, Halloween, Easter etc)?
- Which festival would you like to compare between Canada and HK (e.g. Christmas, Halloween, Easter etc)?
- How does your country celebrate Christmas/ Year?
- What kind of food do you usually have in Christmas/ New Year?
- What activities do people usually do at Christmas/ New Year in Canada/ Hong Kong?
- How do people celebrate Christmas or other festivals in different countries?
- Have you had any interesting experience at any festival in the past?

**Group 3 & 7: Travel around the world**
- Which tourist spots of your country would you like to talk about in the project?
- What are the special features of that place?
- Do you think Canada/ Hong Kong is a good place to travel? Why or why not?
- If you were a tourist ambassador of Canada/ Hong Kong, how would you promote Canada/Hong Kong to foreigners or other countries in the world?
- Have you had any exciting or unforgettable journey before?
- Which place or country would you like to travel in the future? Why?

**Group 4: Pop culture**
- Which pop culture would you like to focus on in your project (e.g. TV show, movie, dance, song, fashion, drama etc)?
- Have you ever been involved in any performance of pop culture (e.g. musical/ dance/ drama performance, fashion show and so on)?
- How does pop culture affect our social life and society? What role does pop culture play in your country?
- Do you have any recommendation of good movies or TV shows?
- How would you promote pop culture of Canada/ Hong Kong and integrate it with education? What can we learn from pop culture?

**Group 5 & 6: Natural resources and environmental protection**
- What are the major environmental problems in the world?
- Which natural resources are available in Canada/ Hong Kong?
- What are the major functions of those resources?
- How could we make use of those natural resources to protect our environment?
- Have you ever participated in any environmental protection campaigns (e.g. Cleaning school campaign, energy saving plan, recycling activity). How do you think those activities may send the important message of environmental protection to the public?
Group 8: Impact of computers and multi-media
- How often do you use computers and the Internet at home and in school? Which multi-media (e.g. computers, TV, telephone, fax, emails, etc) do you find the most interesting and efficient?
- Do you usually use MSN/ ICQ to talk to your friends online? Do you like online conversations? Why or why not?
- Do you agree that multi-media is a useful tool for people to learn and to work? Why or why not?
- What influences do you think multi-media may have for your school learning and daily life? How would you make use of web resources to learn English?
- Would you prefer to learning through computers/the Internet or learning through traditional textbooks? Why?
- How do you think computers may help you maintain the relationship with friends or relatives living in a foreign country?
- Do you think that global learning network (e.g. this Sister-class Project) may offer you a good chance to make new friends and share cultural information?

Group 9: World records
- Look for some interesting world records that Canada/Hong Kong holds.
- Is there any tourist spot about world records available in Canada/ Hong Kong (e.g. The Guinness House at the Niagara Falls area in Canada, and the Ripley' Believe It or Not Gallery at the Peak of HK)?
- Have you been to those galleries before? What experiences have you had in those galleries?
- What do those galleries display? How do they attract foreigners to visit Canada/ Hong Kong? How do they promote the major culture of your country?

Group 10: Leisure and entertainment
- What entertainment or extra-curricular activity would you like to focus on in the project?
- What do you learn from those activities?
- What do you usually do during your leisure time?
- Can you recommend some good recreational activities and recreational places for young people?
- How do you think those activities may positively or negatively affect young people?

Group 11: Games and sports
- Which sports or games would you like to focus on in this project?
- What are your favourite games and sports? How often do you play games and sports?
- Have you ever won any sports prizes or championships? If so, what were those prizes? How meaningful were those prizes for you?
- What are the popular games or outdoor activities for young people in Canada/Hong Kong? How do those games/activities may affect young peoples’ health, mind, and life?
**Group 12: Childhood dreams**
- Can you tell a fairy tale of your culture?
- What lesson do you learn form the story?
- Imagine that you were one of the main characters of the fairy tale, what would you have felt about the experience you had?
- What childhood dream or fantasy have you had? How meaningful is the dream for you?
- Did your parents tell stories or fairy tales to you when you were a small child? How did those stories influence your moral thinking and learning attitude?

**Group 13: Making friends overseas**
- Do you have any pen pal or any friend living in a foreign country?
- How do you write your pen pal (in the form of printed letters or online conversations)?
- What do you usually share with your pen pal?
- Why do you think it is enjoyable and worth to write to your pen pal? Would you recommend or encourage young people to write to pen pals? Why or why not?
- What have you learned or benefited from writing to your pen pal?
- How do you think computers may help you maintain the friendship with your pen pal?
- Do you think that global learning network (e.g. this Sister-class Project) may offer you a good chance to make new friends and share cultural information?
Appendix 5

Sister Class Project Website

Sister-class Project:
Multiliteracies redesigning the future of ESL teaching

**Project Abstract**

As the world becomes technologically and culturally connected in the Information Age, the new concept of multiliteracies, which refers to all meaning-making systems other than purely linguistic ones by incorporating visual (e.g., pictures), auditory (e.g., music), gestural (e.g., dance), and multimodal (e.g., web links) meanings (New London Group, 1996), becomes significant in Second Language Education, because it effectively extends the scope of traditional literacy and enriches ESL teaching for educational and social success. This *Sister-class Project* is part of the federally-funded *Multiliteracies Project* collaboratively conducted by the University of Toronto (OSISE/U) and the University of British Columbia (UBC), aiming to investigate innovative teaching approaches to literacy education in response to the new realities of growing diversity and rapid technological advancement in society.

**What’s New**

- Connection between sister-class projects has been set up.
- Student list from each school is ready in the Knowledge Forum.
- The final version of the e-Lective language learning program will be installed in the participating schools in Toronto and Hong Kong by the end of October 2004.

**Key Milestones**

- 1st week of Oct 2004: The researchers will give the teachers and the students clear guidelines of using the website, and set up the link to the Knowledge Forum.

---

**Sister-class Project:**
Enhancing literacy skills through Multiliteracies practices

**Objective and Research Questions**

The user experience aims to explore effective ways of teaching the literacy practices of students by making use of (1) visual and linguistic devices to make students more active, (2) educational and communication technologies (ICT) to support learning. In particular, this study explores the effectiveness of multimedia in a PCI context by discussing the following issues:

- What is multimedia in ESL teaching?
- How do multimedia and text teaching complement each other?
- How do teachers integrate multimedia and text teaching in their practice?
- How do students use multimedia in their learning?

**Research Focus and Method**

This study is designed to explore the educational impact of multimedia in ESL teaching. The research questions focus on the role of multimedia in enhancing literacy skills and the integration of ICT in the classroom.

---

**Sister Class Project Website**

Enhancing literacy skills through Multiliteracies practices

**Objective and Research Questions**

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- How do teachers integrate multimedia and text teaching in their practice?
- How do students use multimedia in their learning?

**Research Focus and Method**

This study is designed to explore the educational impact of multimedia in ESL teaching. The research questions focus on the role of multimedia in enhancing literacy skills and the integration of ICT in the classroom.
Multiliteracies Case studies

Dual language showcase
Thornwood Public School

Multiliteracies meeting Mathematics
Middlefield Collegiate Institute

Dual language identity text: Bringing students cultures to the fore of literacy
Michael Crummy Elementary School

Sister-class project: Multiliteracies redesigning the future of ESL teaching
Ashton Meadows and Our Lady's College

Multiliteracies resources and learning tools

Resources for Researchers

Researchers for Teachers

Resources for Students

Researchers for Parents
Sister-class schools

<table>
<thead>
<tr>
<th>School name</th>
<th>Key contact</th>
<th>Subject Areas</th>
<th>Galleries of students' projects</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Lady's College</td>
<td>Sister Amy Lam</td>
<td>Language arts, English studies</td>
<td>📜</td>
<td>📜</td>
</tr>
<tr>
<td></td>
<td>Tel No. (852) 2327 5800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Lung Fung Street, Wong Tai Sin, Kowloon, Hong Kong</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashton Meadows Public School</td>
<td>Mr. Jason Wu</td>
<td>Language arts, English studies, Geography</td>
<td>📜</td>
<td>📜</td>
</tr>
<tr>
<td></td>
<td>Tel No. (905) 887 2656</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>230 Clairmont Rd., Markham, Ontario L3C 1T3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Back to Home Page

Sister-class Project's Vote Caster

Welcome to the Vote Caster.

How often do you visit this website?
- Every day
- Very often
- Sometimes
- Not very often
- Never

How often do you log in to the knowledge forum or public forum?
- Every day
- Very often
- Sometimes
- Not very often
- Never

What is your main purpose of visiting this site?
- Collecting online resources
- Sharing academic information
- Getting feedback from others
- Reading news
- Others
Sister-Class Project (Fall 04) Views

Please select a view:

- Announcements (7)
- Group 1: Features and fixed (9)
- Group 2: Features and fixed (19)
- Group 3: Transit (19)
- Group 4: Pop culture (9)
- Group 5: Natural resources (21)
- Group 6: Natural resources (8)
- Group 7: Transit (42)
- Group 8: Impact of computers & multimedia (15)
- Group 9: World trade (20)
- Group 10: Urban and entertainment (12)
- Group 11: Games and sports (21)
- Group 12: Childhood dreams (9)
- Group 13: Making ends meet (22)
- Introduction (14)
- Reflecting to school visit (2)
- Web resources (9)
- WebCT Getting Started (2)
- WebCT Help (6)
# Appendix 6

**Students’ Literacy Log Template**

<table>
<thead>
<tr>
<th>Day</th>
<th>Reading materials: e.g. Textbooks, Course materials, Chapter books, Fictions, Non-fictions, Library resources, Newsletters, Magazines, Online materials and weblinks, e-books, Sister-class discussion forum etc.</th>
<th>Minutes Read</th>
<th>Language(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Thursday</td>
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<td>Friday</td>
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<td></td>
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<tr>
<td>Saturday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) How many hours did you use (i.e. read, hear or watch) these media in the past 2 weeks?

- Printed books/texts: ________ hours a week
- Newspapers/ Magazines: ________ hours a week
- Internet on computer/ tablet/ cellular phone: ________ hours a week
- Social media: ________ hours a week
- Television: ________ hours a week
- Radio: ________ hours a week
2) Why did you choose to read the materials you have listed in the above table? You can check more than 1 boxes.

- To show participation and fulfill a course requirement
- To research relevant information for an assignment
- To explore personal interests
- To learn more about the subject taught and the outside world
- To establish a social network and share ideas with others

3) What kind of information and news do you want to know from the above resources/media? Please write down the numbers from 1-10 according to what you would like to know more (E.g. if you want to know the news of culture the most, put 1 on the line right next to it)

- World news (e.g. War and peace, military force, politics etc.) _______
- Culture (e.g. Traditions, customs, cultural practices & values etc.) _______
- Environment (e.g. Natural disaster, natural resources, pollutions etc.) _______
- Policies (e.g. Immigration policies, social welfare, educational policies etc.) _______
- Travel (e.g. Sightseeing spots, traveling experience etc.) _______
- Multimedia (e.g. Technological inventions, computer tools, apps etc.) _______
- Languages (e.g. New language use, e-words, language learning tools etc.) _______
- Pictures & Videos (e.g. Instagram, YouTube, Flickr etc.) _______
- Social media (e.g. Facebook, Twitter, MSN, ICQ, etc.) _______
- Academic resources (e.g. subject areas, research, educational tools etc.) _______
Appendix 7

Interview Questions

Questions for the teachers:

1) What are the major difficulties and challenges you have faced in setting up and coordinating the project, strengthening your students’ literacy skills, facilitating their online discussions, providing feedback, and evaluating their works throughout the Sister Class Project?

2) To what extent do your students read in school and outside of school? What kind of texts do they usually read? What kind of texts required by the curriculum do your students need to read? What do you think may motivate your students to read more extensively and willingly?

3) What instructional approaches have you implemented in your class to help your students improve their literacy skills? Have you initiated any instructional innovations in your literacy teaching? How do these innovative ideas differ from your previous teaching practice? What is the educational outcome of the new instructional approach?

4) How did your students respond to those innovations? Were they enthusiastic, positive, resistant, or indifferent? What work did your students produce? Were you satisfied with their works? Why or why not?

5) What common task-based activities do you usually design for your students? Have you planned and carried out any literacy activities for your students in out-of-school contexts? How were those activities related to the school curriculum? How effective do you think those activities were in enlightening your students’ critical thinking and enhancing their literacy skills? What were your students’ responses toward those activities?

6) What is your general reaction to the Sister Class Project? Do you find it interesting, helpful and effective in motivating your students to learn, offering them positive interactions, empowering them equally in the school context, offering them a good chance to work collaboratively with others, and assisting them to improve their literacy skills? What educational implications do you find from the project?

7) Do you have any suggestions for improving the project website and the project in general? Would you recommend your school to implement similar collaborative projects with other schools in the coming future? Why or why not?
Questions for the students:

1) How often do you read? What kinds of readings do you like to read?

2) What are the major sources of your reading materials? What are the approximately reading time do you spend on: (a) reading books, (b) reading print materials, (c) reading materials on the computer, and (d) reading texts from other sources?

3) Do you have access to a computer at home? Do you like reading on the computer? Why or why not? What are the major purposes for you to use computer? Have you had any interesting experiences in doing research, reading texts, and doing assignments online?

4) What was your initial reaction when your teacher and the researcher proposed the Sister Class Project that you, your classmates, and sister-class partners undertook?

5) Have you encountered any difficulties in the Sister Class Project (e.g. looking for relevant materials and resources, communicating with your group members, using the project website, accessing to computer or the Internet, getting feedback from the teacher, writing cultural texts and reflection reports, receiving help from the teacher or your parents in proofreading your texts, producing webpage, doing class presentations etc.)?

6) Did you enjoy communicating and working with your peers in the project? How often did you talk to your group members online? What did you focus on in your online conversations? Comparing to traditional group works (e.g. working with group members in a physical location), did you find it more interesting and efficient to work together through the Internet? What major resources did you find and use for this project?

7) Did you find the project website efficient and worth to use? If so, what did you find most worthwhile about it? Were you proud of your works presented in class and published on the website? Did you invite your family, relatives and friends to visit the website to view your projects? What comments and reactions did they have to your works?

8) Did you enjoy the out-of-school literacy activities organized and lead by your teacher? Why or why not? What activities have you participated in the past two terms? Did you find those activities useful for your literacy learning? If so, in what ways did you find them helpful? Did you receive more interesting inputs for your writing assignments from those activities? Would you consider participating in similar activities in the future?

9) If you were invited to participate in a similar Sister Class project in the future, would you suggest any modifications? What modifications and why? Would you recommend students from other schools to take part in similar project if they were given a chance to do so?
Appendix 8

Suggested Outline: Travelling Around the World

Author: Stephanie Fan (AM)

View: Group 7: Travelling around the world

Creation Date: Feb 28 2005 (11:45:41)

Project Outline

Okok…. I see all of your points. I think the title should not be too long for our cultural newsletter, otherwise our audience may lose interest in hearing us. And we need to keep a balance between the HK’s and Canada’s travelling sites.

Our teacher suggested that we should explain the difference between natural and man-made resources in our project, because this is matching with our textbook and we may have a test on it. What do you think?

I think this is the best outline with all the ideas you shared. Good job, guys!

Title: Go! The Amazing Attractions of Canada and Hong Kong

1) Introduction of Canada and Hong Kong

2) Famous landmarks made by man of Canada (with a detailed description)

3) Famous landmarks made by man of Hong Kong (with a detailed description)

4) Natural attractions in both Canada and Hong Kong (with lots of pictures and details)

5) Reflections on traveling in Canada and Hong Kong
Appendix 9

Shared Materials: Natural resources and Environmental Problems

Hi folks!!!!

Nice to see you again here…. I think we have all found some information from our textbooks and the Internet in the past weeks.

After reading the articles and links you guys have posted, I find these resources from the project website for you to look at. I think they are most useful for our topic! I think we should save these links and highlight the important points from them. I have also saved some good articles in the document file in our group. Please read them and share your thoughts.

http://sts.gsc.nrcan.gc.ca/clf/landscapes_provinces.asp

This site has many landscape pictures that we can add to our project! I hope this helps.

Can we go through these websites and take notes together in the class? Don’t forget we need to match our research with our outline, and we need to start writing our draft soon.
Web Resources

Please select a resource:

http://resources.emb.gov.hk/envir-ed/ by Teacher on Dec 6 2004 (22:54:21) [Delete]
Environmental education site

http://resources.emb.gov.hk/nature/com01/index.htm by Teacher on Dec 6 2004 (22:57:18) [Delete]
Be friends with nature

natural resources in Hong Kong

environment protection campaign in Hong Kong

http://www.dsd.gov.hk/home/index.htm by Queenie Cheung on Jan 6 2005 (5:54:56) [Delete]
water pollution

Energy Sources

http://www.wwf.org.hk/eng/index.html by Queenie Cheung n Jan 8 2005 (3:09:31) [Delete]
WWF Hong Kong

http://www.epd.gov.hk/epd/eindex.html by Wincy Ng on Feb 1 2005 (2:46:12) [Delete]
About pollution in HK.

http://www.umich.edu/~gs265/society/waterpollution.htm by Wincy Ng on Feb 1 2005 (2:48:21) [Delete]
About water pollution in the earth.

http://www.greenpeace.org/china_en/ by Debbie So on Feb 1 2005 (2:50:23) [Delete]
Greenpeace
Hello group members,

This is part of my draft about water and air pollution in Canada:

In Canada, we have 22% of the Earth's fresh water, but the water is getting more polluted from hazardous products and automobiles. In Canada, we have quite a lot of air pollution too. Sometimes when you're driving on the road, you will see many factories with large smoke stacks and a lot of smoke coming out of them. Those smoke may seriously harm our air, living environment and health!

We learned from our class that air pollution comes from different sources, including natural and man-made pollution. Air pollution includes gases, fire smoke, volcanic ash and dust particles. Research shows that air pollution may worsen asthma symptoms. Old adults are more likely to visit the emergency for breathing problems when summer air pollution is worse.

I myself was born with asthma. I usually breathe hard when I come across with grimy air, gas or smoke. I need to be on medication whenever I have a breathing problem. But my parents said I am already lucky to be raised in Canada where pollution is less severe and visible compared to many other countries in the world.

So does Hong Kong have a lot of pollution too? Can you compare the pollution problems between HK and Canada? Do you have any health problems caused by pollution?
Natural Resources in Canada

Hello again group members, I have found some useful information to talk about the natural resources in Canada. This is more detailed than the textbook and worksheets we discussed last time. Shall we include this in our project? >:<

Some of Canada's natural resources are as follows: iron ore, nickel, zinc, copper, gold, lead, molybdenum, potash, diamonds, silver, fish, timber, wildlife, coal, petroleum, natural gas, and hydropower.

We also export our natural resources and other technology to other countries, and in return we get the natural resources and other technology that we do not have an abundant amount of.

Some resources that we export are as follows: motor vehicles and parts, industrial machinery, aircraft, telecommunication equipment, chemicals, plastic, fertilizers, wood, pulp, timber, crude petroleum, natural gas, electricity, and aluminum.

This information is received from the following website:

http://www.infoplease.com/ipa/A0107386.html

P.S. Thank you Crystal and Carmen’s suggestions. I’ll look for more information about water pollution and include it in my part.
And more pictures we can use:
Hi guys, I think our teacher is right that we should add a section of suggestions otherwise there is no point for us to choose the topic about pollution. May be we talk about the Kyoto Accord at the end because it looks like a good solution to the problems we raise in our project. I am now including this in my draft:

The Kyoto Accord is a treaty that is international. The Kyoto Accord is an agreement including many other countries around the world that would like to reduce the amount of greenhouse gases in the world.

The greenhouse gas levels have increased rapidly and greatly since the industrial revolution. A particular gas that has been increasing is CO2 (carbon dioxide). These gases are produced from humans burning oil, coal and fuels. The gases produced are trapped in the Earth's atmosphere just like how a greenhouse traps the heat of the sun. The Earth will then become very heated; therefore, there is a problem of Global Warming.

Global Warming is causing winter ice caps to reduce by 40% since 1970. The reduction of ice caps will cause polar bears to be extinct very soon.

The heating effect on Earth is accelerating faster because the heat melts the white snow, leaving the dark Earth that absorbs more solar energy.

More heat trapped in the Earth's atmosphere causes a change in weather patterns as well as more violent weather to occur. The tornadoes, hurricanes and blizzards will be very powerful from the heat energy. This weather can cause many deaths in the world. An example would be the tsunami in Asia that occurred in December of 2004. Weather phenomena have caused sorrow, deaths, and devastation.

Source: https://www.theguardian.com/education/2004/dec/31/highereducation.uk1
This information has been received from the following website:

http://mindprod.com/kyoto.html
Appendix 11

Discussion Forum: Festivals & Food

Author: Maggie Leung (AM)  
View: Group 2: Festivals and food  
Creation Date: Feb 28 2005 (11:15:08)

How to celebrate Christmas

Hey group members I found a great website on how to celebrate Christmas. You might want to take a look at what kinds of things people do on this day in different counties.

In my opinion this website can teach you a lot, but not everyone in Canada celebrates in the same way. I come from an Indian background, and I might not celebrate Christmas in the same way as any other people.

Please write back to tell me if you'd like me to elaborate about this holiday, and if you have any other holidays you'd like to talk about

http://www.saskschools.ca/~gregory/chr/

Hope you like it!
How People celebrate Christmas in France

Celebrating Christmas in France reminds everyone of the very first Christmas. It is usually a holiday for the children, while New Year's celebrations are for the adults.

About a week before Christmas, the family sets up the crèche (manger scene). In the crèche, they place Mary, Joseph, shepherds, angels, and the farm animals. Baby Jesus is left out of the crèche until the family returns from the Christmas Eve midnight mass. The Three Wise Men are added to the crèche on Jan. 6th, the Epiphany.

On Christmas Eve, candles are lit around the crèche. A Yule log (soaked in wine) is lit and carols are sung. The children place their shoes in front of the fireplace, so that Pere Noel can fill them with gifts. After midnight mass on Christmas Eve, the family returns home and has a feast of oysters, sausages and wine.

Stuffed goose and a special French dessert (shaped like a Yule log) is served for the Christmas dinner.
## Appendix 12
### Writing Rubric of Identity Texts

Name: ________________________  Date: __________________

**Group Topic:** __________________

<table>
<thead>
<tr>
<th>Performance Expectation</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organize information to include a central idea using well-linked and well-developed paragraphs (W3)</td>
<td>No evidence of organization; only ad hoc gathering of disjointed ideas.</td>
</tr>
<tr>
<td>Demonstration of critical thinking <em>(making judgments &amp; syntheses, appropriate comparisons and contrasts, showing insights)</em> AND inner feelings</td>
<td>Very little demonstration of the use of critical thinking and/or inner thoughts and feelings</td>
</tr>
<tr>
<td>Use of opening sentence in each paragraph</td>
<td>No understanding of the use of opening sentence</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some degree of organization. The main idea of each section is not too clear. Only a few ideas are connected. Points of view are not too well-supported. Quite a bit of Incoherent writing.</td>
<td>Demonstration of planning and organization. The main idea of each section is generally clear. Most ideas are connected. Most points of view are supported with facts or expanded statements. Writing is generally coherent.</td>
<td>Demonstration of careful planning and skillful organization of information. The main idea of each section is clearly. All ideas are coherently connected. All points of view are well-supported with facts or expanded statements. Writing shows coherence and impact.</td>
</tr>
<tr>
<td>Some critical thinking included, but not much well-supported or explained; not much synthesis. Very little expression of inner thoughts or feelings</td>
<td>Mostly general reflections with some appropriate, personal points of view; some attempt to support and/or to explain own judgments; some inner thoughts and/or feelings are expressed</td>
<td>Skillful expression of personal points of view, which are well supported or explained. Strong personal convictions &amp; feelings are expressed. Opinions based on different perspectives are included; excellent syntheses</td>
</tr>
<tr>
<td>Some understanding and/or application of the opening sentence in each paragraph; but the usage is either ineffective or inappropriate</td>
<td>Some understanding and/or application of appropriate opening sentence in each paragraph; but the usage lacks impact</td>
<td>A good understanding and/or application of effective opening sentence in each paragraph; the usage creates impact on the readers</td>
</tr>
<tr>
<td>Proofread their final drafts, focusing on grammar, punctuation, conventions of style (W8)</td>
<td>No evidence of self-editing or peer-editing. There were still a lot of grammatical/ punctuation errors.</td>
<td>Some degree of self-editing has been made; only one peer editor was used. There were still a few grammatical/ punctuation errors.</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Use of vocabulary appropriate for the project</td>
<td>No demonstration of vocabulary appropriate or relevant to the topic</td>
<td>Only minimal usage of vocabulary appropriate or relevant to the topic</td>
</tr>
<tr>
<td>Use of transitional words to connect sentences</td>
<td>No usage of any transitional words to connect sentences</td>
<td>Minimal or inconsistent usage of transitional words to connect sentences; hence, some incoherent writing</td>
</tr>
<tr>
<td>Demonstration of reading independently for research purposes</td>
<td>No evidence of additional information obtained from independent reading</td>
<td>Some evidence of additional information obtained from independent reading</td>
</tr>
<tr>
<td>Completion of assignment</td>
<td>Assignment was not completed or handed in.</td>
<td>Assignment was handed in _______ days late.</td>
</tr>
</tbody>
</table>

**Mark/ Grade for writing : ___________________________**
Appendix 13

Discussion Forum: Travelling around the world

Author: Jessie Leung (AM)  Note #478

View: Group 3: Travelling around the world
Creation Date: Mar 13 2005 (9:45:48)

Important words for project

Hi guys,

I found the meaning of SAR and the Basic Law of Hong Kong from this website:
http://en.wikipedia.org/wiki/Hong_Kong Can we use it in our project?

Hong Kong (Chinese: 香港) is one of two special administrative regions (SARs) of the People's Republic of China (PRC), the other being Macau. Situated on China's south coast and enclosed by the Pearl River Delta and South China Sea, it is renowned for its expansive skyline and deep natural harbour. With a land mass of 1,104 km² (426 sq mi) and a population of seven million people, Hong Kong is one of the most densely populated areas in the world. Hong Kong's population is 95 percent ethnic Chinese and 5 percent from other groups. Hong Kong's Han Chinese majority originate mainly from the cities of Guangzhou and Taishan in the neighbouring Guangdong province.

Hong Kong became a colony of the British Empire after the First Opium War (1839–42). Originally confined to Hong Kong Island, the colony's boundaries were extended in stages to the Kowloon Peninsula and the New Territories by 1898. It was occupied by Japan during the Pacific War, after which the British resumed control until 1997, when China regained sovereignty. Hong Kong's independent judiciary functions under the common law framework. Its political system is governed by the Basic Law of Hong Kong, its constitutional document, which stipulates that Hong Kong shall have a "high degree of autonomy" in all matters except foreign relations and military defence.

Anything else you have found? Please share more!
Appendix 14

Bilingual Identity Text Project ‘Travelling Around the World’

Canada and Hong Kong

Canada

Canada has many attractions. Those attractions made by humans could be divided into three groups: amusement parks, malls and monuments.

There are many theme parks in Canada. For example, Paramount Canada’s Wonderland which is Canada’s first theme park is one of the best amusement parks in the world. There are over 200 exciting attractions and even 60 thrilling rides. In this theme park, there is also a 20 acre water park. Paramount Canada’s Wonderland is north of Toronto off Highway 400 and just ten minutes north of Highway 401.

In the Niagara Falls region, there is a very unique theme park called Marine Land. This is a very special attraction since it is not only a theme park but also a place where you can meet many animals such as deer, bears, killer whales and many, many more. Marine Land is at 7657 Portage Road which is one mile from Horseshoe Falls.

The last amusement park that I will include is CNE. This is an annual fair held near the heart of downtown Toronto. It was founded in 1879 and there are 65 rides along with a large food court and many shops. Here, they have an annual celebration of Chinese New Year. At this celebration, you can see lion dances, martial arts and many other Chinese traditional. You can also buy many things that are related to the Chinese culture.