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**Improving Pupils' Attitude to English Learning and
Cultural Understanding through Email Exchange: an
Action Research Project in a Secondary School in Taiwan**

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A thesis submitted in fulfilment of the requirement for the
degree of Doctor of Education in Durham University

School of Education
Durham University

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ABSTRACT

Electronic mail (e-mail) has been widely used in communication for many years.

The main purpose of this action research was to explore whether utilizing an email exchange project can enhance secondary school pupils' motivation and attitude to language learning and improve their intercultural learning. This was a collaborative intercultural email exchange project between two secondary schools, one in north east of Taiwan and another one in the USA. The researcher sought to identify the attitudes of and concepts of learners and teachers towards the email exchange. This study adopted qualitative and quantitative methods. However, there was more focus on qualitative data in order to determine if the project improved the pupils' attitude to learning English and develop their intercultural communicative competence. In order to ensure trustworthiness, multiple data collection instruments were employed in this study. The findings show that using e-mail can benefit pupils in their language and intercultural learning.

The study examines outcomes and factors that made the project successful. It sets the research in the context of a theoretical framework and Taiwan education policy and suggestions for further work and research of this kind. The limitations of this study are also discussed.

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DECLARATION

No material contained in the thesis has previously been submitted for a degree in this or any other university. The work is original, except where indicated by special reference in the text. Any views expressed in the dissertation are those of the author.

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DEDICATION

To those who have been helping me through the whole journey.

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ABBREVIATIONS

AR	Action Research
C1	The Native Culture
C2	The Target Culture
CALL	Computer Assisted Language Learning
CLT	Communicative Language Teaching
CMC	Computer-Mediated Communication
EFL	English as Foreign Language
Email	Electronic Mail
ESL	English as Second Language
IECC	Intercultural E-mail Classroom Connection
MOE	Ministry of Education
SLA	Second Language Acquisition
ZPD	The Zone of Proximal Development

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Chapter 1 Introduction

1.1 Background of Technology in Language Education

Over recent decades, the use of technology has increased opportunities for everyone to connect with people around the world, and to share experiences in a more interactive way (Oxford, 1990). It has also been an aid for educational use and welcomed by English as Foreign Language (EFL) or English as second Language (ESL) teachers. Chapelle (2001) stated that language learning through technology has become a fact of life with important implications for second language acquisition. Considerable research studies found that the integration of technology promoted learners' motivation, enhanced their language learning, and improved their academic performance (Blake, 2000; Cheng, 2003). Technology can enrich foreign language teaching and learning using different forms, such as chat room discussion, group emailing, web-based courses, and video-conferencing.

Among all of the computer-based activities, electronic mail (email), an asynchronous form of communication, has been called "the mother of all Internet applications" (Warschauer, Shetzer & Meloni, 2000: 3) and has brought our world closer together. Email messages can be exchanged by individuals or delivered to a local audience or a global one; they can include text but also pictures, sound, videos, and hyperlinks to web pages. Brown (2001) pointed out that the goal of English teaching is to enhance the EFL/ESL learners' interaction with people in the real world. From this perspective, email has created this kind of authentic communication in a natural environment and allows EFL/ESL learners to read and write to native speakers across the globe on a regular basis in an efficient and economical way (Warschauer & Healy, 1998).

Many educational organizations have provided email exchange projects to connect learners worldwide to improve language learning and cultural understanding through telecommunication activities with authentic materials. Examples include eTandem, ePALS Classroom, IECC (International Email Classroom Connections), and KeyPals Club. These different intercultural email exchange projects among learners of various countries aim to enhance their intercultural understanding experience (Jogan, Heredia & Aguilera, 2001). Hence, it matches well with many education needs, especially those of EFL/ESL instruction.

This kind of world trend for integrating IT in teaching and learning for educational purposes has influenced Taiwan's educational development policy. In the past few years, the Taiwanese government has invested a huge amount of money to equip classrooms with computers, projectors and Internet connections, etc. The crucial education reform in 2001, Grade1-9 Curriculum Reform, emphasised "capacity for lifelong learning" with "active exploration, problem solving, and the utilization of information and languages" (Ministry of Education, 2002, 2005b, 2008b, MOE hereafter). Under the guidelines of the curriculum reform, each learning area, including English, has to have IT integrated into the instruction. "Challenge 2008-National Development Plan" even set its goals to cultivate the ability "to master foreign languages, especially English, and the use of Internet" and to "establish a comprehensive life-long learning system" (MOE, 2005b). However, not enough has been done with regard to real classroom application, in spite of the teacher training that has been held for the application of the technology in classroom practice. This is largely due to a top-down approach to policy implementation (Chang, 2003) instead of coming from the teachers' own needs. The top down policy does not motivate teachers sufficiently and give them a sense of ownership to implement the policy in the actual classroom. Furthermore, the majority of teachers who lack computer literacy or an IT background hesitate to use IT in their own teaching, and younger teachers with IT backgrounds are unfamiliar with the instructional design (Chang, 2003; Yeh, 2002).

Many studies in Taiwan have shown the challenges faced by teachers when conducting IT in the classroom setting (Chang, 2003; Yeh, 2002). However, most of the studies were done in the context of English instruction in the senior high school or universities, and studies in secondary schools have been rare (Liaw, 2002). How English teachers and their learners might collaboratively implement IT with multimedia tools and support language acquisition is in need of investigation. The problem of English learning and reservations about the use of IT in the Taiwanese context will be explored in the following section.

1.2 Statement of the Problem

The difficulties faced by Taiwanese secondary school learners learning English can be understood in terms of the following factors: (1) English as a Foreign

Language (EFL) environment, (2) the curriculum, (3) the way to deliver the English lesson in classrooms and (4) the culture of teaching and learning

First, English is studied as a foreign language in Taiwan (rather than as a second language). This means that pupils are exposed to it mostly in the classroom environment instead of through daily usage outside of the classroom. After they have walked out of the classroom, there is not enough stimulation or exposure to English or opportunities for them to keep practising. According to Krashen (1994), exposure to a second language outside school is paramount for its acquisition. Therefore, the EFL environment makes learning more difficult and requires far more efforts for Taiwanese pupils to master English compared to pupils in an ESL environment.

Second, despite the official promotion from the government of the communicative approach to enhance Taiwanese learners' communicative competence in English, the long-term influence of the Grammar-Translation Method still remains deep-seated. In 2001, the Ministry of Education (MOE) advocated Communicative Language Teaching (CLT) method as an English teaching and learning goal for Grades 1-9 Curriculum Guidelines. This educational reform in secondary school English teaching has tried to shift from the Grammar Translation Method and Audio-lingual method to CLT, with more concentration on communication in the four language skills. However, many EFL teachers in secondary schools are not prepared well enough for the CLT method required in the new curriculum. There is a lack of motivation to change because of the pressure of preparing pupils for the entrance examination and there is also a lack of proper teacher training to help them teach English in a communicative way (Li, 2004; Tsai, 2007). Most of the training was conducted in the name of reform without sufficient attention to practical methods to be implemented in real classroom situations. Furthermore, in CLT, the use of communicative activities and authentic language tasks, which are meaningful for the pupils and create opportunities for them to engage in real communication, are not well used in the Taiwanese context. Secondary schools here lack an interactive learning environment and authentic English materials, and teachers have limited proficiency in English and little knowledge of CLT where application of communicative methodology can be challenging.

Third, English classes in Taiwanese secondary schools are mainly teacher-centred with insufficient genuine interaction between pupils and teachers; hence, little dialogue is produced in the traditional Taiwanese classrooms where the pupils are

passive and seldom participate in discussions among peers or with the teachers orally or in written form. This leads to low motivation of pupils to learn. Furthermore, the English instruction places more emphasis on correctness of forms and grammar at the sentence level. Therefore, pupils may be capable of filling in the blanks in tests or produce some isolated simple sentences based on the exams, but fail to express themselves meaningfully in written English (Huang, 1997). Moreover, reading and writing are largely focused on passing the entrance examination. Pupils lack the opportunity to read or write with any real purpose because teachers struggle to teach these two language skills in a communicative way. The tradition of preparing the pupils to pass the entrance examination for entering senior high schools is hard to change overnight. Some of the teachers do try to create a meaningful context in teaching writing; nonetheless, most pupils usually write for the sake of the teacher and not for communicative purposes because the whole teaching and learning environment is still very exam-oriented.

Fourth, the emphasis on cultural teaching and learning in the educational reform has made culture an increasingly important component of English language teaching in the Taiwanese context. Even though culture and language are recognised as an integral part of the language acquisition process, the questions as to which culture(s) and through what approaches teachers should expose learners have still not been clearly answered.

These factors outlined above are interwoven and constitute a difficult context which Taiwanese secondary school pupils find themselves facing when learning English. In the process of searching for solutions to the problems, one possible approach is the application of computer technology. An intercultural email exchange project can promote interactive situations to improve learners' communication competence. Through email exchange combined with process writing and discussion with peers and native speakers in a collaborative way, pupils can gain the opportunity for exposure to authentic contact with the target language and speakers. This will supplement what they learn in class. However, research on this type of email exchange has seldom been undertaken in secondary schools in Taiwan. Therefore, an important focus for this study was to determine whether an email exchange project could be utilised to improve students' attitudes to learning English.

1.3 Purpose of the Study and Research Questions

Despite the fact that the Internet is embraced by educational establishments and has been integrated into some curricula, it has not been widely used in high school English classes in Taiwan; rarely has it been researched. Therefore, it is necessary to explore whether the use of it will be beneficial to the pupils, and what difficulties and problems it may bring. Christine Nuttall (1982: 33) stated ‘the best way to improve one's knowledge of a foreign language is to go and live among its speakers. The next best way is to read and write extensively in it.’ Furthermore, second language acquisition (SLA) researchers (Krashen, 1985; Krashen & Terrell, 1983) have investigated the effects of email interaction on second language development. Email activity has increased the extensive opportunity and environment for EFL/ESL adults to read English naturally and to be exposed to native speakers for written communicative purposes. There are three main reasons why email was chosen as the appropriate communication tool in this study. First, email is one of the modern and efficient Internet tools. This research seeks to contribute to our growing understanding of how and to what extent interaction in the email exchange project improves the children's attitude to second language acquisition. Second, research in this area in Taiwan is still in its infancy, but this project may have a contribution to make in unravelling hidden dimensions of an email exchange project. Finally, the research results may be of interest to secondary school English teachers to assist their pupils with the communicative tasks that require in-depth input, output and interaction during the whole email communication process.

The purpose of this action research was to use email as a tool to see how the collaborative intercultural email exchange project could help pupils attitude to English and cultural learning in Taiwan. This study aims to examine the effect of email exchange projects on pupils' motivation and attitudes towards English reading and writing and cultural understanding. This study asks the following four questions:

1. What are the participants' perceptions of and attitudes toward their English learning during the email exchange project?
2. What are the participants' perceptions of and attitudes regarding using the email exchange project to develop intercultural learning and to what extent did the pupils' learning in this area increase?
3. What are the participants' difficulties, solutions and their suggestions about the project?

4. What are the teachers' reflections of using email as a tool for language and culture teaching?

1.4 Significance of the Study

Email exchanges in schools have increased exponentially over the past few years, although in Taiwan most researchers focus more on the effectiveness of emailing in adult or college pupils' studies (Liaw, 1998; 2002) and few studies have investigated how email enhanced the reading and writing performance of school-aged EFL learners in secondary schools. In light of these concerns, this action research presents a collaborative intercultural email exchange project for secondary EFL pupils at a national curriculum school. It is based on widely accepted theories and methods of modern second language instruction. By offering a "close up" or "insider's view" of the exchange development through an action research study, it is hoped that EFL/ESL teachers wishing to set up their own exchange projects can better make their own decisions about the use of email exchange project with their particular EFL/ESL pupils.

Furthermore, the timing of this study coincides with a strong push by the Taiwanese government in the direction of IT. In 2002, the Educational Bureau announced "Challenge 2008" National Development Plan, a 6-year strategic plan to integrate IT into local schools, calling for teachers and administrators to make a paradigm shift and put IT into practice. One of the objectives is to develop a new generation of creative, lively youths capable of international dialogue and adept at using information and English skills to their advantage (MOE, 2002). This study seeks to make a contribution to helping learners to face the challenges in the Digitalised Learning Environment in the 21st century. The results of this action research study are also intended to contribute to filling the gaps in literature, practice, and research on foreign language learning and CMC.

1.5 Research Methodology

When language teachers plan to incorporate the Internet into the classroom, the strengths and limitations of its resources should be discussed and realised. To address the major difficulties encountered by English learners in Taiwan, I proposed to integrate the use of Internet technology in English learning and implement the guidelines of process writing. To evaluate the effect of the collaborative Email

Exchange Project in the real context, I constructed an action research as a teacher and a researcher, and also invited a co-teacher to observe my English writing class as a critical friend. The teacher assisted the teaching of the class while I conducted the process writing in class discussion, the on-line collaborative email project and collected qualitative and quantitative data to address the research questions of this study.

This action research was conducted from September 2008 until June 2009. It was a collaborative intercultural email exchange project between two schools, Ru Fang Secondary in north east of Taiwan and Holidayburg Area Secondary School in the USA school (the names have been changed for confidentiality). Ru Fang Secondary School is a national curriculum secondary school offering year 9 to year 12 for thirteen to fifteen-year-olds. The EFL participants in this study were twenty-six eighth graders. Most of them had a lower to mid intermediate level of English proficiency. They were all distributed among different classes, but volunteered to join in this project and received regular communicative teaching instruction from the researcher (myself).

Hollidaysburg Area Secondary School is a high school for grades 9-12, representing thirteen through eighteen-year-olds. Our American partners all spoke English as their mother tongue and some were going on to learn Chinese as a foreign language in the following academic year. For a period of two semesters, the participants communicated with their American keypals every other week through exchanging emails on the ePAL website. They exchanged information in English on the email tasks assigned by the researcher after the discussion with the American partner teacher. Each message that the Taiwanese pupils wrote in reply to their American keypals was forwarded to my personal email account in the ePAL website according to the regulations of that website.

After conducting this collaborative intercultural email exchange project based on exemplary ESL pedagogy and methods, the assessments of pupils' perceptions and attitudes were collected as the project progressed, and pupils were given the questionnaire at the end of the project to illustrate their perceptions about the project. Additional data was gathered through pupils' email writing, individual and group student interviews, the researcher's and the pupils' reflective journals, and the classroom observation comments from a critical friend.

1.6 Thesis Structure

The following is a brief description of this thesis' structure. Chapter 1 is an introduction to how this research originated, delineating the difficulties that Taiwanese pupils encounter in English learning. It also presents the purpose, the research questions, and the significance of this study. Chapter 2 (Review of the Literature) focuses on four converging aspects of this study: (I) research on current theories and methods for modern language learning; (II) motivation and the review of culture and language teaching; (III) issues regarding process writing, collaborative learning and Internet technology in EFL/ESL contexts and Taiwan; (IV) and research on email writing in the second language classroom. Chapter 3 (Design of the Study) provides an explanation of methodological approaches used in this collaborative intercultural email exchange study, including the research design, description of project site and participants, data collection, data analysis, validity, and a list of key research goals and questions that guided this study. Chapter 4 (Data analysis) examines data gathered through a variety of research instruments, using a small amount of quantitative data but mainly qualitative results. These data were used to gain insight into pupils' perceptions and attitudes toward the intercultural email exchange project, as addressed under subheadings for each question that guided this study. Chapter 5 (Discussion) focuses on the results of data gathered, discusses the findings with the literature review and the implications of the findings. Finally, chapter 6 (Conclusion) illustrates the contribution of this study, the limitations of the research, and suggestions and the recommendations for English teachers and future research.

Chapter 2 Review of Literature

2.0 Introduction

The purpose of this chapter is to provide the background and theoretical framework for this action research. This literature review will be divided into three sections as follows: context background, theoretical background and the use of email. The first part provides a general context background related to the Grade 1-9 Curriculum and English teaching in Taiwan and the reasons for using an email exchange project in this study. In the second part, the related theories and approaches for language teaching, motivation, culture learning, writing instruction and, more briefly, computer technology in teaching will be discussed. The third part will focus on the pedagogical use of email in language learning and teaching. The strong and weak points from previous empirical studies and the possible challenges in incorporating the suggestions into the Taiwanese school system will be examined in more details.

2.1 Context Background: The New Curriculum and EFL Education in Taiwan

2.1.1 The Reform Grade 1-9 Curriculum

The reform of the grade 1-9 curriculum in Taiwan, which took place in 2001, revised the curriculum structure from a focus on subjects to learning areas and aimed to provide integration between and among them. The seven learning areas were Language Arts, Mathematics, Science and Technology, Social Studies, Health and Physical Education, Arts and Humanities, and Integrative Activities. The terms refer to the areas of learning instead of just the titles of subjects (MOE, 2005b) although some subject titles still appear. The intention of the Taiwanese government was to make the curriculum more progressive and to encourage teachers to design the curriculum to integrate the different learning areas especially with information technology to face the global challenge. Moreover, six major issues, Gender Education, Environmental Education, Information Technology Education, Human Rights Education, Home Economics Education, and Career Development Education, were infused into the learning areas. Each learning area aimed to develop pupils' core competence as follows: 1. self-understanding and exploration of potentials, 2. appreciation, representation, and creativity, 3. career planning and lifelong learning, 4.

expression, communication, and sharing, 5. respect, care and team work, 6. cultural learning and international understanding, 7. planning, organizing and putting plans into practice, 8. utilization of technology and information, 9. active exploration and study, and 10. independent thinking and problem solving (cited in MOE, 2005). Teachers in each learning area were required integrate the six major issues and were encouraged to adopt peer or team teaching to enhance the core competences of pupils.

As technology has gradually become centre-stage of our lives, and the pupils are becoming a “computer generation”, there are compelling reasons to incorporate technologies into the classroom in order to provide pupils with the skills to flourish in the global world and face different cultures in the fast-paced international society. The specific relevance of this education reform in Taiwan for this study is the increased emphasis on the utilization of technology information to cultivate pupils’ skills in this area and also on cultural learning and international understanding to broaden their own views about different cultures in order to face global challenges. There are different ways to employ information technology in the context of language learning and teaching. Among all of the technology tools, electronic mail (email) writing is a basic and easy one to access, and rapidly gaining popularity since it started (Warschauer, 1995). Therefore, this study tried to utilise email exchange projects for pupils to learn outside of the classroom as one way of helping them to take a confident step forward into the 21st century. This will be discussed further in a later section.

2.1.2 English Education in Taiwan and its Challenge

With the aim of fostering national development and international relationships, the education policy in Taiwan aims to prepare pupils with quality English education and information technology skills to face competitiveness in the global arena. In order to achieve that goal, the MOE determined that from the autumn semester of 2001 English learning should commence from the fifth grade instead of the seventh grade. It was then introduced lower down the age group to the third grade in order to provide an earlier start for the pupils. The emphasis on language proficiency development changed from a focus on the listening and speaking skills in the primary schools to the integration of the four language skills in secondary school. The Communicative Language Teaching (CLT) approach was advocated with an expectation of shifting the focus from the grammar-translation method to CLT in

order to create a natural and meaningful learning environment. The three main goals of the Grades 1-9 Curriculum in English are to cultivate pupils' basic communicative competence in English, to enhance pupils' interests and motivation for English learning, and to develop pupils' understanding of their own culture and foreign culture (MOE, 2002). As mentioned earlier in 2001, as emphasis on culture in the Nine-Year Integrated Curriculum of English Teaching for primary and secondary schools in Taiwan was also introduced. Pupils were expected to understand festivities and customs of the foreign countries, be able to express their own country's festivities in English, and also show respect to different cultures. The general goal related to culture was to facilitate the understanding of international affairs, technological information, and foreign cultures so that the pupils would be familiar with the foreign and native cultures and world trends (MOE, 2005b).

Furthermore, the government formulated the "Challenge 2008" comprehensive six-year national development plan in order to transform Taiwan into a "green silicon island" (MOE, 2002). One of the highlights of this reform was to cultivate talent for the Internet generation and also to meet the future challenges of globalization and internationalization through emphasizing the ability to use digital technology. With this constant policymaking, teachers were expected to apply the CLT model, integrate technology and explore culture learning in their teaching to maximise pupils' interests and to enrich knowledge in language. This was to replace the mechanical approach to instruction that was widespread. Despite all of the regulations from the government, the policy has been difficult to implement due to the top down approach and the lack of sufficient teacher training. Also it was difficult to affect practice in a test-oriented situation. EFL teachers in Taiwan, especially in secondary schools, have been accustomed to teaching English with a focus on the language components due to the exam-oriented system, and with minimal linkage to other subjects or integration with technology. English still remains an independent subject and fails to focus sufficiently on developing real communication. Liaw & Huang (2000) reported the situation that EFL teachers found it difficult to cope with overwhelming educational innovation while facing educational reform with IT issues and interdisciplinary integration. Although teaching in secondary school classrooms is still fairly traditional, the Ministry of Education in Taiwan (MOE), has continued to try to introduce reform. The email exchange in this study sought to relate to different

aspects of the policy goals from the government such as the policy on integrating IT, intercultural learning to be a world citizen.

There are also other practical issues that make implementation of the new policies difficult. For example the diverse levels of English proficiency in the same secondary school classroom present a challenge. Nowadays, the 'bi-polarity' phenomenon, where half of the class performs exceedingly well, and the other half shows little or no motivation in learning, is serious. Furthermore, the homogeneous setting and the large classroom size (30-40 pupils) also limit opportunities for learners to have authentic language interaction with each other or with native speakers, which is essential for language acquisition. Moreover, although the new policy emphasised the importance of cultural learning, this is often done in a very limited way. The emphasis on culture in teaching and learning can be conducted narrowly by just introducing the different festivals or some worksheets to fill in the blanks without any real consideration or deep thinking about the cultural background. Writing is also emphasised in the secondary school curriculum, yet pupils often do not have adequate training to write simple sentences. This is in part due to the main focus being on listening and speaking at primary school level and the main training being on grammar translation to prepare for examination at secondary school level.

The way innovation is achieved in the classroom settings, therefore, needs to be addressed in-depth and pragmatically according to Huang et al., (2004). The researcher in this study tried to explore if one of the technology tools, email exchange, could motivate the pupils to learn by introducing an authentic communication environment to reinforce pupils' language and culture learning to meet the goals of the education reform in Taiwan. In the following section, theories relevant to this study including the comprehensible input theory, output and interaction theory, social cultural theory, motivation and methods such as culture learning and process writing will be addressed. In addition, how the pedagogical techniques in Computer Assisted Language Learning (CALL) can be integrated into an intercultural email exchange project will be discussed to bridge the gap between theory and practice.

2.2 Theoretical Frameworks

There are six fields to be addressed within the following discussion of the theoretical frameworks and pedagogical techniques. Firstly, theories and approaches in the development of language teaching and learning relevant to this current study

will be summarised. The second field will discuss motivation briefly. The third field moves on to a discussion of culture and language teaching and will be more focused on the intercultural communicative competence. The fourth field will look at writing instruction and more explicitly on process writing. In the fifth field, the theory and application of Computer Assisted Language Learning (CALL), computer mediated communication (CMC) will be addressed. The main focus in the sixth field will be the use of email communication.

2.2.1 Communicative Language Teaching

The Communicative Language Teaching (CLT) approach with its emphasis on meaning and communication gradually gained more attention as an alternative approach to the grammar-translation and audio-lingual methods. CLT was considered to be an ‘approach’ rather than a ‘method’. An approach is more a set of principles whereas a method is more specific with a set of procedures to apply the principles. In other words a method is more detailed and specific than an approach. The goal of CLT is to develop “communicative competence” in language teaching (Warschauer & Kern, 2000) and aims to “develop procedures for the teaching of the four language skills that acknowledge the interdependence of language and communication” (Richards & Rodgers, 1986: 66). Unlike the Audio-lingual approach, which relies on repetition and drills, in the CLT approach the teachers design tasks that pupils may encounter in real life and pupils are involved in the shaping of activity outcomes through their reactions. In this approach pupils’ motivation for learning derives from their desire to be able to communicate in authentic ways with meaningful topics.

In terms of skills, Littlewood (1981: 6) simplifies CLT into four domains that involve a person’s communicative competence: *The learner must attain as high a degree as possible of linguistic competence... The learner must distinguish between the forms which he has mastered as part of his linguistic competence, and the communicative functions that they perform... The learner must develop skills and strategies for using language to communicate meanings as effective as possible in concrete situations... The learner must become aware of the social meaning of language forms.*

Nunan (1991: 279) also outlines five basic characteristics of CLT that involves the learners’ communication and interaction as follows:

1. An emphasis on learning to communicate through interaction in the target language

2. The introduction of authentic texts into the learning situation
3. The provision of opportunities for learners to focus, not only on language but also on the learning processes itself.
4. An enhancement of the learner's own personal experiences as important contributing elements to classroom learning.
5. An attempt to link classroom language learning with language activation outside the classroom.

To sum up, CLT is an approach concerned with the needs of pupils to communicate outside the classroom; the teaching method reflects language content and materials with an emphasis on activities such as role play, pair work and group work, interviews, language exchanges, games or information gap, etc.

In spite of these well-recognised characteristics, CLT still has weaknesses in its implementation according to some writers. Stern (1992) argued that one of the most difficult problems to make classroom learning communicative is the absence of native speakers. CLT is more successful in English as a Second Language (ESL) contexts when there is a supportive learning environment outside of the classrooms. In contrast, in EFL contexts it meets more obstacles in its application with physical limitations, such as learning environments, teachers' English proficiency, the availability of authentic English materials and speakers. The email project as used in this study is one of the practical methods that could be employed to try to meet these challenges to put the communicative language approach into practice. It does so by bringing in real communication from beyond the classroom walls. In this case, computer assisted language can provide a helpful means of addressing these issues to create a communicative language environment as will be discussed in a later section. In the following section, a closer look at communicative competence will be provided.

2.2.1.1 Communicative Competence

As mentioned above, the primary goal of CLT is to develop learners' communicative competence. American sociolinguist, Dell Hymes (1972), first coined this term in contrast to psycholinguist, Noam Chomsky's theory of "Linguistic Competence". Hymes believed that speakers of a language not only need to have linguistic competence to be able to communicate effectively in a language; they also need to know how the language is used by members in the speech community to accomplish their purposes appropriately (Hymes, 1968). Meanwhile, Hymes claimed

that language learners should interact with a “real speaker-listener”, instead of Chomsky's view of the “ideal speaker-listener”. The latter is thought of as being in a homogeneous speech community and unaffected by grammatically irrelevant conditions as memory limitation, distractions, and errors in applying his knowledge of the language in actual performance (Chomsky 1965: 3). It is unrealistic to ignore such factors in communication.

Based on Hymes’ theory, Canale & Swain (1980) and Canale (1983: 7-11) further extended the notion of “communicative competence” into four components as follows:

(1) Grammatical competence: words and rules; this refers to linguistic competence as defined by Hymes, which learners display by using words and grammar rules (Savignon, 1983).

(2) Sociolinguistic competence: appropriateness; this means the learners' ability to use language appropriately in different contexts. Pupils need to understand the role of participants, the information they are expressing, interpreting, and the function of the interaction between pupils and their participants.

(3) Strategic competence: appropriate use of communication strategies; it concerns the strategies used to repair communication breakdowns that result from imperfect knowledge of rules or from performance variables such as distraction, or inattention.

(4) Discourse competence: coherence; this refers to the ability to know how to put words, phrases, and sentences together to make up a coherent whole in different genres like conversation, speeches, email messages, newspaper articles.

Furthermore, Brown (2000: 267) provided an overview of CLT as criteria for language teaching in the following interconnected characteristics:

(1) All elements of communicative ability (grammatical, discourse, sociolinguistic, and strategic) are the focus of classroom goals and are not limited to only speech and grammar.

(2) Language is used in real and meaningful ways, without an overemphasis on language forms.

(3) Fluency and accuracy are both important principles, but accuracy may take a backseat to fluency to maintain pupils’ interest in meaningful conversation. However, at the risk of communication breakdown, fluency should not be advocated in place of clear, coherent, communication.

(4) Pupils are encouraged to speak freely and to use unrehearsed dialogue receptively and productively rather than being controlled by the teacher or by overemphasis on language forms.

Brown (2001) also highlighted that the interactive nature of communication is the essential part of current theories of communicative competence. These competences are all relevant to the email exchange project to different degrees; strategic and discourse competences are more related, and grammatical competence is less so in term of the interaction. And more emphasis should be put on sociolinguistic competence in order to make the email exchange project go smoothly.

In the following section, the researcher will summarise the different hypotheses and among them, the interaction perspective is the main emphasis conceptualizing the relation between second language learning and computer technology in this study.

2.2.2 Comprehensible Input

Krashen's Input Hypothesis on "Comprehensible Input" (1980) proposed that "Comprehensible Input" is the key source of acquired knowledge of language. Krashen defined comprehensible input as " $I + 1$ "; I refers to the learner's current knowledge and 1 means the next level. It is a form of input that is just a little beyond the learner's competence but is nevertheless understood; whereas intake is "that part of the input that the learner notices" (Schmidt, 1990: 139). Language acquisition occurs when learners are exposed to the comprehensible input a little beyond their current level of competence (Krashen, 1982). This is similar to Vygotsky's zone of proximal development learning and will have further discussion in the interactionist theory section.

The main points of Input Hypothesis are presented by Krashen (1982: 21) as follows:

1. *Input Hypothesis relates to acquisition, not learning.*
2. *We acquire by understanding language that contains structure a bit beyond our current level of competence ($I + 1$). This is done with the help of context or extra-linguistic information.*
3. *When communication is successful, when the input is understood and there is enough of it, $I + 1$ will be provided automatically.*
4. *Production ability emerges. It is not taught directly.*

For Krashen (1981: 101), the main function of the second language classroom is “to provide intake for acquisition through meaningful and communicative activities”. Meanwhile, according to Krashen's Affective Filter Hypothesis (1982), motivation, self-confidence, and anxiety are the three variables that affect the input, which is the degree of success in second language acquisition and learning. This hypothesis states that it is easier for a learner to acquire a language when he/she is not tense, angry, anxious, or bored (Krashen & Terrell, 1988). Krashen described the ESL pupil's emotional state as an adjustable filter that can enhance or discourage language acquisition, depending on these variables. If pupils are anxious, lacking motivation or self-confidence, they will have high affective filters to inhibit language acquisition. In other words, pupil learning can be enhanced through language activities that lower their affective filter. Motivation will be examined more in section 2.7.

Nunan (2004: 47) described input as “the spoken, written and visual data that learners work with in the course of completing a task. Data can be provided by a teacher, a textbook, or some other source” and he (2004: 12) emphasised that the “combination of authentic, simulated and specially written materials provide learners with optional learning opportunity.” The input hypothesis from Krashen here is helpful as a reminder to provide more authentic and stimulating input for language learners because there may be dangers with their learning that pupils just stay with what they know and do not take risks. Practising what you know is valuable in language learning but it may be limited. The input related to the email project is not only from the respondents, but also the teachers although the interaction between classmates and native speakers played the more essential role.

Scholars have criticised Krashen's input approach as necessary but not sufficient to acquire an L2 and that it fails to consider two important perspectives of L2 learning: interaction and output. Swain (1985) claimed that output is equally as essential as input. Later on, Savignon (1991) argued that the input needs to be authentic, interactive, and meaningful, as demanded in CLT. More discussion will be presented in the following sections.

2.2.3 Output Hypothesis

Swain (1985: 249) argued that comprehensible input is insufficient for successful SLA and proposed the ‘Comprehensible Output Hypothesis’ as an addition to the input/output hypotheses. He believed that acquisition comes about when learners are pushed in their output because output provides “the opportunity for meaningful use of one’s linguistic resources” (Swain 1985: 248) and the role of output is “to provide opportunities for contextualised, meaningful use, to test out hypotheses about the target language, and to move the learner from a purely semantic analysis of the language to a syntactic analysis of it.” (Swain, 1985: 252)

Furthermore, Swain claimed that output helps learners to have a concentration on syntactic processing to focus on form. They noticed that output requirements can lead pupils to analyse their language and such output may include writing or speaking exercises to develop grammatical features. Pica (1987) also shared a similar perspective and suggested that the benefit of giving language learners the chance to negotiate meanings with native speakers allows them to realise their intended communication.

2.2.4 Interaction Hypothesis

Long (1980) proposed the “Interaction Hypothesis” and claimed that “a crucial site for language development is interaction between learners and other speakers, especially, but not only, between learners and more proficient speakers and between learners and certain types of written texts, especially elaborated ones” (Long & Robinson, 1998: 2). Gass (1997) and Long (1996) stated that learners’ efforts to resolve miscommunication facilitates their second language acquisition because the interaction leads them to more exposure to comprehensible input and modifies their output. This type of interaction was defined by Pica (1994: 495) as “modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility”.

Furthermore, Gass (1997) pointed out that input is most effective when it is part of an interaction with others rather than with a text. Interaction allows learners to negotiate meaning to try to make meaning comprehensible (Kramsch, 1986). Through negotiation of meaning, learners firstly receive input and then produce output that is facilitative and perhaps even necessary for grammatical competence to develop in interaction. In that case, interaction provides learners with the opportunity to lead

their attention to language, particularly when communication has broken down. The relationship between input, interaction and output is explained as the figure below.

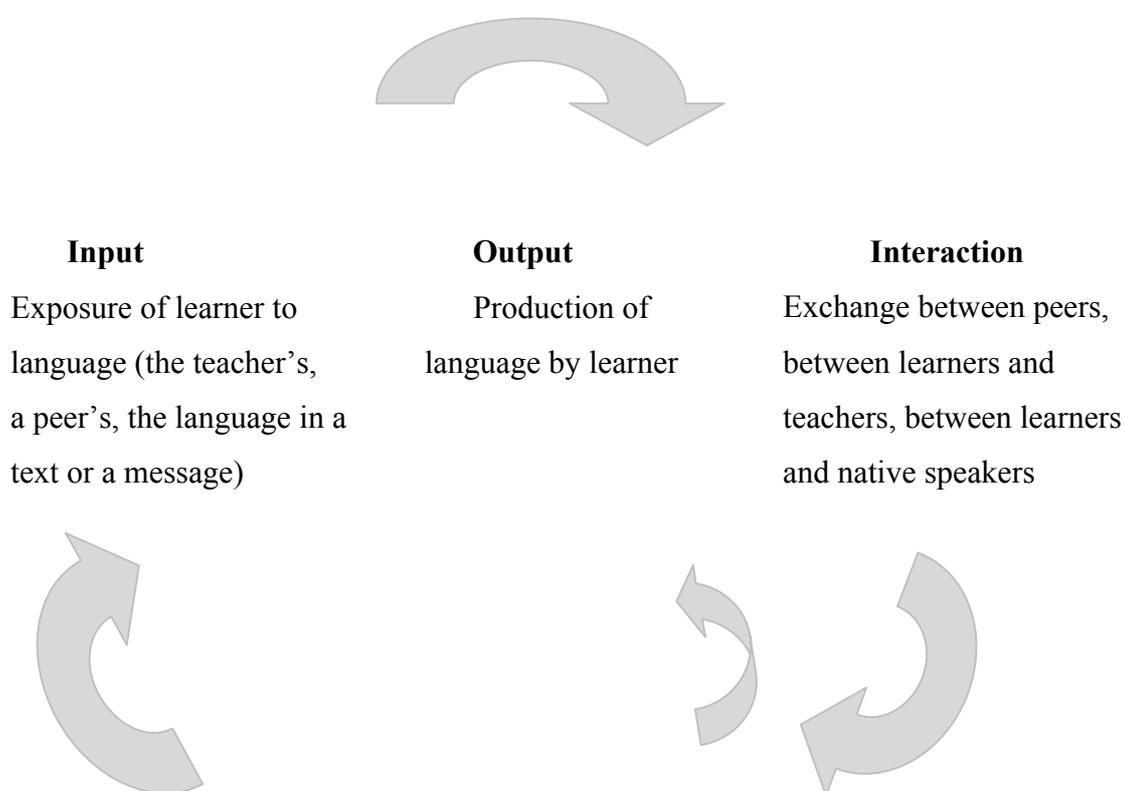


Figure 2.1: Input-output model of language acquisition - adapted from Lamy and Hampel (2007: 20)

Krashen's input hypothesis (1985) states that second language (L2) input must both be comprehended and be at one stage above the learner's current level (I+1) in order to be acquired. An added stipulation is that the learner is emotionally receptive to the input, or, in Krashen's terms, the affective filter must be low. Thus, comprehensible input is held to be a necessary, though not sufficient, condition for SLA (Krashen, 1985; Long, 1980). The input and interaction hypothesis (Long, 1980) combines an argument that emphasised the importance of input comprehension to SLA and the value of modifications to discourse structure for learner comprehension. The next section explains interactionist theory in more details.

2.2.5 Interactionist Theory

The Interactionist Theory, which emerged from the hypothesis, was influenced by Krashen (1980) and Long (1980) and emphasises the importance of interaction and the necessity to acquire meaningful and comprehensible input for L1 and L2 development to occur. Chapelle (1998) provided a useful model to demonstrate what makes input comprehensible and explained how this input becomes output as shown in the diagram below (Figure 2.2).

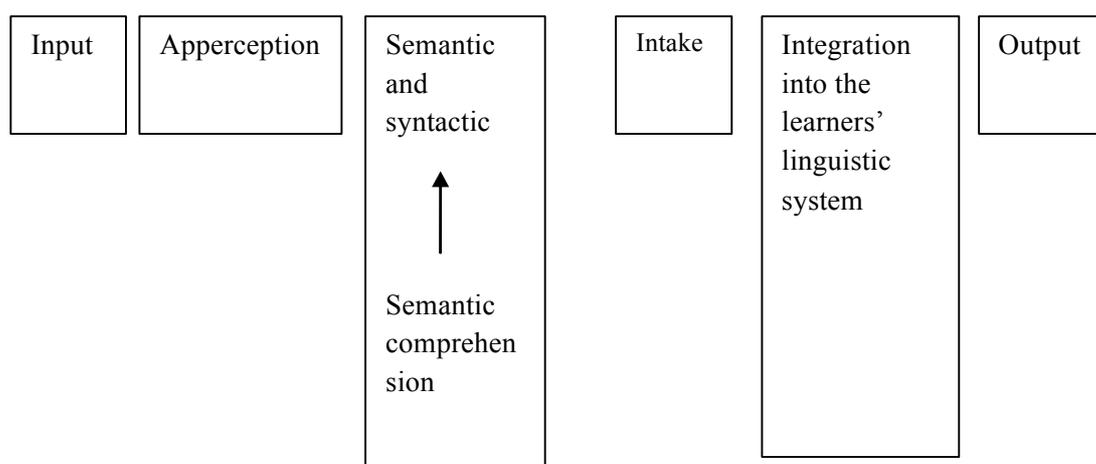


Figure 2.2: Basic components in the SLA process in interactionist research - adapted from Chapelle (1998: 23)

Chapelle (1999) claimed that it is necessary to expose learners to input that is “enhanced” to get it noticed and “adjusted” to make it “comprehensible.” ‘Input’ refers to when the learners have direct contact with the target language, and ‘Intake’ to the way learners process the language that contributes to its meaning. ‘Output’ is the result of the process. He outlined several principles of interactionist theory as follows:

- 1) Learners should notice the linguistic characteristics of the target language input that they receive.
- 2) Learners need to have opportunities to produce target language output.
- 3) Learners need to notice errors in their output.
- 4) Learners need to correct their linguistic output.

5) Learners need to engage in target language interaction whose structure can be modified as needed for comprehension.

As Chapelle (1999) asserted, the Interactionist Theory is related to the principles for Computer-Assisted Language Learning (CALL) application. The reason behind that is because the use of computers can provide interaction where learners engage in meaningful negotiation procedures. Language development occurs in the context of social interaction between the pupils, peers, and the teachers and that is what email exchange is focused on. The topic will have further discussion in the CALL section.

2.2.6 Social Cultural Theory (ZPD and Scaffolding)

Russian psychologist Vygotsky (1978) developed a sociocultural model of human development that is related to the Interactionist Theory in second language acquisition. He claimed “the zone of proximal development” (ZPD) to be “the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.” (Vygotsky, 1978: 86). It means there are two levels of development for each learner: a level of independent performance, and a level of potential development. The gap between these two levels is called “the zone of proximal development” (ZPD) (Feeze & Joyce, 2002: 25-26). And it can be presented in the following diagram.

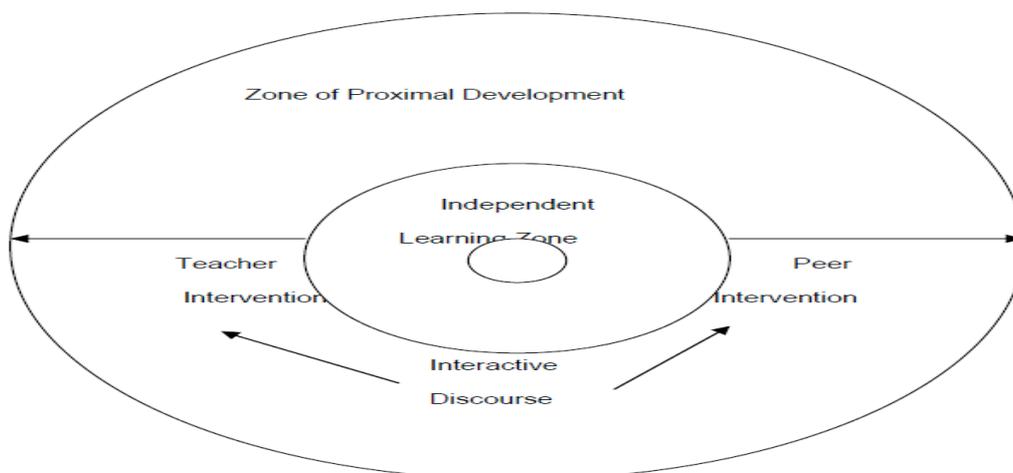


Figure 2.3: Independent and potential learning zones-adapted from Corden (2000: 9)

That is the realm of potential learning that each learner could reach within a given developmental span under optimal circumstances and with the best possible support from the teacher and others in the environment (Oxford, 1997: 448). It demonstrates the difference between what a learner can do with guidance and what he or she can do without assistance. Vygotsky (1978) emphasised that learning is a process that involves environmental input and social interaction and he claimed that parents, caregivers, peers and the culture were responsible for the development of higher order functions. The notion of scaffolding (Vygotsky, 1978) is to develop ZPD and through a process of constructivism which takes place at a developmentally appropriate learning zone. Through peers, pupils can support each other through interaction and be each other's motivators. Tharp and Gallimore (1988) used a four-stage model to show children's development in language learning as follows.

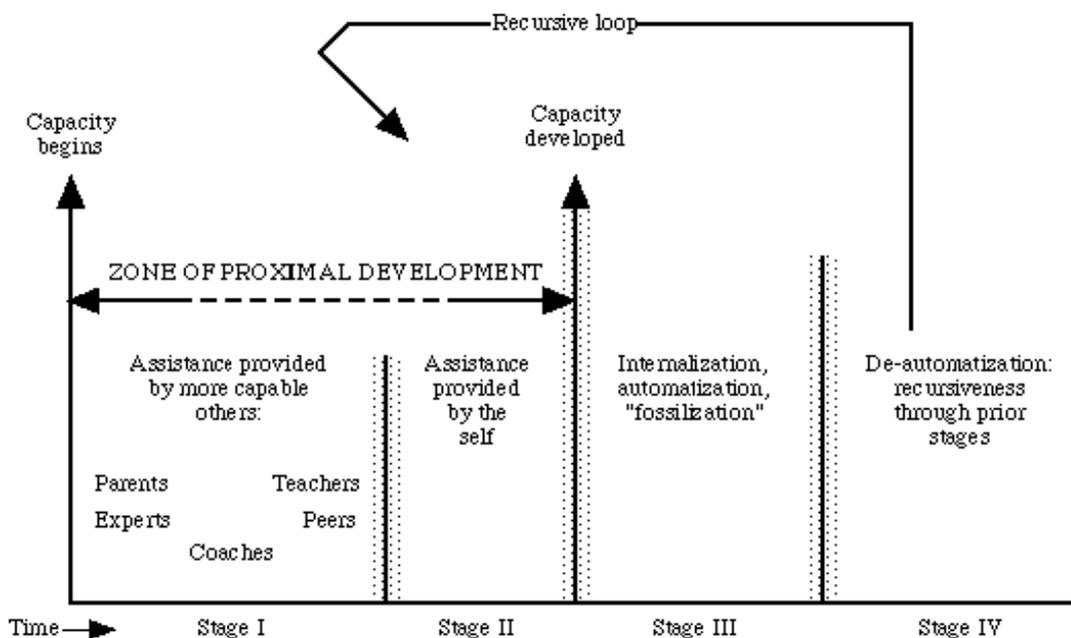


Figure 2.4: A four-stage model to show children's development in language learning - Excerpted from Tharp and Gallimore (1988: 35)

In terms of the application in a classroom situation, Zeuli (1986: 7) advised teachers to “understand how cognitive tasks fit into the child's cultural activities” in order to be able to construct interactions and guide the learners to move from tasks to tasks independently. Furthermore, he (Zeuli, 1986: 3) clarified that “Instruction

should emphasise connections to what the learner already knows in other familiar, everyday contexts.” Vygotsky (1962) claimed that the connections do not occur immediately and teachers play an essential role in assisting learners. He (1962: 121) emphasised that “instruction cannot be identified as development, but properly organised instruction will result in the child’s intellectual development, will bring into being an entire series of such developmental processes, which were not at all possible without instruction”. Accordingly, the teaching methodology that aligns with the ZPD “integrates several approaches to form a comprehensive agenda for research of the genesis, development, function, and structure of the human psyche” (Hedegaard, 1996: 229). Vygotsky (1978) reminded us that in the classroom setting, the people who are more knowledgeable are not always the teachers; pupils can be placed in collaborative groups with others to interact with one another and demonstrate mastery of tasks and concepts. For Vygotsky, the teacher acts as a facilitator and the provider of assistance. The teachers’ assistance might help pupils develop their language and cultural skills. When the learner needs the greatest assistance, the teacher gives “scaffolding” to ensure that the learner’s constructs will continue to grow stronger and more complex.

Learners, ideally, should do their coursework within their ZPD through challenging them and scaffolding them. Full development of the ZPD depends upon full social interaction. From this sociocultural perspective (Oxford, 1997), learning occurs through interaction, negotiation, and collaboration. The range of skills that can be developed with adult guidance or peer collaboration exceeds what can be attained alone. These are the main characteristics of “collaborative learning” which was used in this current study. As Oxford (1997: 448) reminds us “cultural and linguistic ideas are best shaped through reflective inquiry with other people (teachers, peers, native speakers, etc.), who help the learner negotiate his or her own ZPD, the student’s degree of potential under the best conditions”. Corden (2000: 8) advises us that “classroom learning can best be seen as an interaction between teacher’s meanings and those of the pupils, so what they take away is partly shared and partly unique to each of them”. This implies that classroom activities should be carefully organised to provide collaborative learning experiences that trigger a child’s development as an individual and social being. Social constructivism is the foundation for collaborative learning in the L2 classroom and collaborative learning will be discussed more in the following section.

2.2.7 Collaborative Learning

Dillenbourg (1999: 2) defined collaborative learning as “a situation in which two or more people learn or attempt to learn something together”. Learners work together and learn mutually from people around them through interaction and negotiation instead of working in isolation. Nunan (1992) suggested that collaborative learning helps pupils to achieve by sharing the same goal; the connection between learners is more solid than purely cooperative learning, which is thought to be a slightly different concept. The following diagram presents a comparison of cooperative and collaborative learning.

Aspects	Cooperative learning	Collaborative learning
Purpose	Enhances cognitive and social skills via a set of known techniques	Acculturates learners into knowledge communities
Degree of structure	High	Variable
Relationships	Individual is accountable group, and vice versa; teacher facilitates, but group is primary	Learner engages with ‘more capable other’ (teachers, advanced peers, etc.), who provide assistance and guidance
Prescriptiveness of activities	High	Low
Key terms	Positive interdependence, accountability, teamwork, roles, cooperative learning structures	Zone of proximal development, cognitive apprenticeships, acculturation, scaffolding, situated cognition, reflective inquiry, epistemology

Table 2.1: Conceptual comparisons among cooperative learning and collaborative learning: Excerpted from Oxford (1997)

According to the distinction from Oxford (1997: 425), cooperative learning refers to an array of highly structured goals and techniques for learning, and

collaborative learning is more philosophically oriented, with the goal of acculturating pupils into the immediate community of learners and the wider world of the target language and culture. The spirit of collaborative learning is what the researcher believed and therefore, the researcher inclined more to using collaborative learning. Several researches embody the constructivist view of acculturation into a community. Warschauer (1997) explores computer-mediated collaborative learning and suggested that communicating through emailing has been viewed as a form of collaborative learning. This type of collaborative form is not constrained within a single classroom environment or restricted with synchronous communication, but extends to asynchronous communication in different places. Through the email exchange process, pupils share the same goal of learning and practise using the target or common language to interact. In the following section, motivation theory will be discussed briefly and then the discussion will move on to a review of the importance of culture in language learning and an exploration of intercultural communication competence.

2.3 Motivation

There is a large body of theories about motivation and various definitions of motivation have been widely discussed. In secondary language learning context, Gardner (1985: 10) defined motivation for language learning as “the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity”. Gardner and Lambert (1972) divided motivations in language learning context into two types: *instrumental and integrative motivation*. *Instrumental motivation* means the practical advantages of learning the language, the desire to learn a language because it would fulfil certain utilitarian goals, such as getting a job, passing an examination, etc.; and *integrative motivation* refers to the personal interest in the people and culture represented by the L2 group; the desire to learn a language to communicate with people from another culture that speak that language; the desire is also there to identify closely with the target language group. Later, there was a third form, *intrinsic motivation*, meaning “motivation to engage in an activity for its own sake” (Pintrich & Schunk, 2002: 245) which challenged the earlier categorisation because it refers to “one’s inherent pleasure and interest in the activity; the activity is undertaken because of the spontaneous satisfaction that is associated with it” (Noels, 2001: 45). *Extrinsic motivation* refers to

“motivation to engage in an activity as a means to an end” (Pintrich & Schunk, 2002: 245). The distinction between intrinsic and extrinsic motivation is one of the most general psychological motivational theories. Intrinsic and extrinsic factors can be easily identified in foreign language classrooms (Brown, 2000).

In this study, more focus will be put on *intrinsic motivation* because that is the ultimate goal for many teachers to reach to assist their learners. It is essential for learners to have intrinsic motivation, with an urge and a passion that keeps the learners going. Learners will learn better if they are motivated and want to do it. Furthermore, I deliberately did not use psychometric instruments to measure the changes of the motivation in this study. The intention was more to reveal how the learners viewed their motivation and whether is increased or decreased. Before moving on to the historical background and implication of CALL and CMC, a review of the importance of culture in language learning and the exploration of intercultural communication competence will be examined first and a discussion about approaches used in classrooms will be provided.

2.4 Culture and Language

Culture has received renewed interest and emphasis and it has gradually become an essential element in English language teaching and this literature review has found many references related to the importance of the authentic culture that is embedded in language (Kitao & Kitao, 1997; Warschauer & Healey, 1998; Hopkins, 1999; Warschauer & Meloni, 2000; Fedderholdt, 2001; Liaw & Johnson, 2001). The phenomena of language and culture are intimately related in various ways. Language is the key to understand culture, and culture is an essential part of studying language (Zhu, 2011). Language is determined by culture, even though the extent to which this is true is still debatable. The converse is true to some degree: culture is determined by language. This section will firstly start with a theoretical perspective on culture in language teaching and then shift to examine the teaching of culture in the Taiwan context. Approaches for the teaching of culture using applicable and systematic instruction will be discussed.

2.4.1 Culture in Language Learning

Although culture is now widely viewed as an integral element in language learning, many teachers still regard introducing linguistic concepts and managing the

classroom tasks as their top priority while teaching. Understanding the target culture was viewed as an automatic by-product of language learning by many teachers with little specific teaching design to promote intercultural understanding in curriculum. Some teachers conducted culture lessons as a temporary refresher in the normal lesson and some believed that introducing information about holidays and the customs of the target culture or even playing movies and songs would be sufficient for learning the target culture. There is no doubt that these activities would assist pupils to develop knowledge to a certain limited extent. However, there is a danger of oversimplifying the diversity of culture without guiding the learners to experience and interact with the culture of the target language in a deeper way. It should be noted that culture represents not only the material products, but also the attitudes, beliefs, ways of thinking and behaviours shared by the community members (Kramsch, 1995). Weaver's (1993) cultural iceberg (See Figure 2.5) demonstrated that a large proportion of our own culturally shaped knowledge is invisible and mostly subconsciously applied in our everyday interactions.

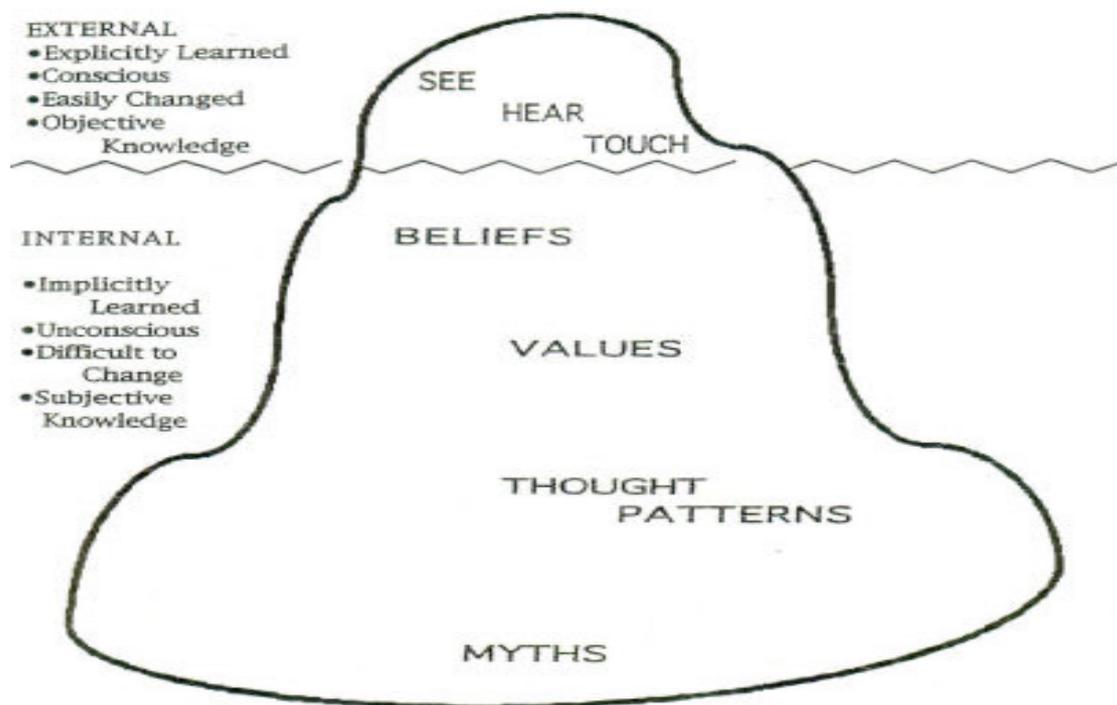


Figure 2.5: Cultural iceberg - Adapted from Weaver (1993)

Wilson (1982) claimed “cross-cultural experiential learning” in culture teaching guides the learners to make comparisons between their own home culture

and the target culture in order to develop a broad global view of the community, the country or the world. In line with that, guiding the learners to explore cultural interactions and guiding them to voice their own views is essential.

Based on the literature review, current thinking on language teaching and learning highlights interculturality and reconceptualises goals in terms of producing ‘intercultural speakers’ who will be capable, adaptable actors and mediators in globalised contexts (Byram & Zarate, 1994; Kramsch, 1993 and 1998).

It is acknowledged that language proficiency alone is inadequate; communication is holistic and requires knowledge of the ways culture and language interlock and an understanding of how interaction across cultures operates. Intercultural language learning has become an important element in language education, a shift that reflects greater awareness of the inseparability of language and culture, and the need to prepare language learners for intercultural communication in an increasingly multicultural world. In order to elaborate this concept clearly, the following section will focus on Byram’s (1997) Model of Intercultural Communicative competence, Kramsch’s “Third Place”, and some suggestions for pedagogic implementation.

2.4.1.1 Intercultural Communication Competence

Hymes’ conception of communicative competence (1972) was expanded in the 1990s to include intercultural communicative competence (Kramsch, 1993), in other words the ability to interact in complex cultural contexts among people who embody more than one cultural identity and language, the ability to “reconcile or mediate between different modes present” (Byram & Fleming, 1998: 12). The concept proposed by Byram (1997) of “intercultural communicative competence” has refocused the aims of language education with culture integrated into language study. The term “intercultural” reflects the view that EFL learners should gain insight into both their own and the foreign culture instead of just focusing on the target culture (Kramsch, 1993). This competency emphasises the mediation between different cultures, the ability to look at oneself from an ‘external’ perspective, analyse and adapt one’s own behaviours, values and beliefs (Byram & Zarate, 1994). An interculturally competent learner therefore displays a range of affective, behavioural and cognitive capacities (Byram, 2006: 22–26) as follows in table 2.2.

•Attitudes/Affective capacities	• Behaviour	• Cognitive capacities
<ul style="list-style-type: none"> - Acknowledgement of the identities of others - Respect for otherness - Tolerance for ambiguity - Empathy 	<ul style="list-style-type: none"> - Flexibility -Communicative awareness 	<ul style="list-style-type: none"> - Knowledge - Knowledge discovery -Interpreting and relating - Critical cultural awareness

Table 2.2: Intercultural communicative competence

Intercultural communicative competence means the “ability to ensure a shared understanding by people of different social identities, and [the] ability to interact with people as complex human beings with multiple identities and their own individuality” (Byram, Gribkova & Starkey, 2002: 10). Therefore, the goal for the intercultural learning is not to achieve native speaker-like competence in the target language, rather to acquire the “competences which enable them to mediate/interpret the values, beliefs and behaviours (the ‘cultures’) of themselves and of others and to ‘stand on the bridge’ or indeed ‘be the bridge’ between people of different languages and cultures” (Byram, 2006: 12) as the “intercultural speaker” (Byram, 1997; Kramsch, 1993).

According to Byram (1997) in his book *Teaching and Assessing Intercultural communicative Competence*, being interculturally competent means to be able to interact effectively (through linguistic and non-linguistic resources) with people from another country in a foreign language. This denotes being able to overcome stereotypes, to be empathic, to understand otherness, to avoid and deal with misunderstandings and to have a willingness to learn from the other in order to know oneself. It reminds us that contact among cultures has the potential to make the individual receive a deeper understanding of his/her own cultural values and also to understand the reasons why people behave in a particular way.

The following table is a brief overview of the various definitions for intercultural communication competence based on the literature review.

SCHOLAR	DEFINITION OF INTERCULTURAL COMPETENCE
<i>Belz</i> (2002: 68)	Intercultural competence is “defined as an awareness and/or understanding of foreign attitudes, beliefs, values, and (linguistic) practices.”
<i>Byram</i> (1997: 70-71)	Intercultural competence is “the ability to interact in their own language with people from another country and culture, drawing upon their knowledge about intercultural communication, their attitudes of interest in otherness and their skills in interpreting, relating and discovering, i.e. of overcoming cultural difference and enjoying intercultural contact.” Intercultural communicative competence is the ability “to interact with people from another country and culture in a foreign language.”
<i>Camilleri</i> (2002: 23)	Intercultural competence requires the development of cognitive, affective, and behavioural traits, specifically it requires a) “developing cognitive complexity in responding to new environments”, b) “motivating affective co-orientation towards fresh encounters,” and c) “directing behaviour to perform various interactions with additional social groups.”
<i>Chen & Starosta</i> (2000: 407-408)	Intercultural competence is “the behavioural aspect of intercultural communication. It refers to the ability to behave effectively and appropriately in intercultural interactions.” Intercultural awareness “is the cognitive aspect of intercultural communication. It refers to the understanding of cultural conventions that affect how people think and behave.”
<i>Fantini</i> (2009: 458)	Intercultural competence “may be defined as complex abilities that are required to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself.”
<i>Guth & Helm</i> (2010a: 18)	Intercultural competence is “a transversal skill that can serve learners in numerous contexts that extend beyond the classroom and the specific language being learned.”

<i>Lochtmann & Kappel</i> (2008: 30)	Intercultural competence refers to “both linguistically and culturally based behaviour patterns that are made use of in interactional situations.”
<i>Lussier et al.</i> (2007: 25)	Intercultural competence includes three dimensions: knowledge, knowing how, being. It also includes “interacting effectively across cultures” which means, “accomplishing a negotiation between people based on both culture-specific and culture-general features that are on the whole respectful and favourable to each.”
<i>Lustig & Koester</i> (2003)	Intercultural competence depends on the context and requires of the individual a variety of appropriate and effective behaviour strategies in addition to knowledge, motivation and actions.
<i>Neuliep</i> (2009: 393)	Intercultural communication competence is “the degree to which you effectively adapt your verbal and nonverbal messages to the appropriate cultural context.”
<i>Sinicrope et al.</i> (2007: 1)	Intercultural competence is “the ability to step beyond one’s own culture and function with other individuals from linguistically and culturally diverse backgrounds.”

Table 2.3: Different definitions of intercultural communication competence - Excerpted from Schenker (2012)

This brief overview of definitions of intercultural competence provides numerous concepts; however, there are some common threads related to effective and appropriate communication skills, and the behavioural aspect of the competence. Therefore, in spite of all of the different definitions for intercultural communicative competence, the study will take Byram’s definition and model. It is a key tenet of current thinking about language education and Byram’s (1997) proposed model can be seen as representative. It provides a comprehensive approach which consists of five distinct but interdependent components (Byram, 1997: 50-63): (1) attitude of openness and curiosity, (2) knowledge of self and other, (3) skills of interpreting and relating, (4) skills of discovery and interaction, and (5) critical awareness. In an educational setting geared toward the examination of difference, learners’ evaluative

points of reference are made explicit and the new evaluative orientation toward difference fosters a readiness for political engagement (Byram, 1997: 44).

Practically, the model offers not only objectives but also an assessment mode for each component and has been put into use extensively in foreign language classrooms. Such elaboration of the model facilitates the teacher and action researcher's task of rationalising and putting the model into practice in the classroom. The definition of intercultural competence is the ability to see yourself as others sees you, to respond to them or to interact with them in the light of that. Someone with intercultural competence is someone able to see relationships between different cultures internally and externally and to mediate for themselves or for other people. It is someone with a critical understanding of their own and other cultures. As Byram emphasises (1997: 63-65) the development of intercultural competence ought to lead to a critical cultural awareness and a political awareness of oneself as a citizen: that means being critical to think about one's own and other cultures and their taken-for-granted values and practices and leading to a political awareness of oneself as a citizen of the world. Byram (1997: 1-3) provides a dichotomy between the "tourist" and the 'sojourner' (intercultural speaker). The tourist is a traveller seeing foreign peoples and cultures with the hope of enriching his/her current way of life, but not alter it. The sojourner produces effects on a society that challenge its beliefs and behaviours.

The key to becoming a sojourner is the ability to decentre (Kramsch, 1998). This process is evidenced when an individual can subjugate his or her own beliefs, practices, values, and meanings when faced with those of the other. Byram argues the qualities of the sojourner related to IC are an integral and definitive part of what it means to learn a foreign language. This is the part most lacking in the Taiwan education environment (Liaw & Johnson, 2001). The main goal of the secondary school learning is still based on pencil paper examination. Grammar translation teaching still plays an extremely important role in spite of the policy to focus on the communicative approach as discussed in the previous section. And the real concept of intercultural communication competence is still not grasped by the teachers, nor applied in the real classroom setting. The responsibility of language teachers with experience to provide learners opportunities to develop the global vision and to become a so-called intercultural speaker instead of a native speaker cannot be underestimated.

2.4.1.2 Kramersch's "Third Place"

Although many studies have adapted Byram's (1997) model, it has been criticised by some scholars. Some were concerned that the model lacks consideration of online contexts and their impact on intercultural learning (Guth & Helm, 2010). Kramersch (1993: 24-26) suggested that an approach towards culture that involves comparisons and contrasts with a learners' native culture and the target culture should be used to aid learners' understanding of another culture. She stresses the notion of "cultural awareness", central to the whole principle of intercultural communicative competence (Clouet, 2006: 55).

This echoes the six aspects for cultural comparisons by Dunnett et al. (1986: 148-149): (1) languages cannot be translated word-for-word (2) the tone of a speaker's voice (the intonation pattern) carries meaning (3) each language-culture employs gestures and body movements which convey meaning (4) languages use different grammatical elements for describing all parts of the physical world (5) all cultures have taboo topics (6) in personal relationships, the terms for addressing people vary considerably among languages. Teachers and learners should be aware of these criteria before they analyse the native and target cultures. The comparison and contrast between the target language culture and the learners' native culture is a good way to approach culture. If language and culture are indivisible, then when learners obtain a new language they will also acquire a new culture. However, it is unreasonable to expect this culture to be the same as the learners' native culture or the target culture.

This leads Kramersch (1993) to suggest a 'third place', which means that foreign language learning takes place in a 'third place' that the learner must make for him/herself between their native culture (C1) and the target culture (C2). This 'third place' involves the language learners in an objective and subjective reflection of C1 and C2 from which they choose their own interpretation and create a personal linguistic and cultural identity to reflect their personal perspectives. Byram calls the individual an intercultural speaker who refers to a person mediating between various cultural contexts. This 'third place' conception highlights "the ability to interact across cultures and to reflect critically and engage with otherness" (Scarino, 2000: 9) and emphasises the importance of individual interpretations of culture rather than stereotypical notions. This should be involved with more activities such describing, analysing, and reflecting on different interactions with culture. Kramersch (1993: 216-

225) suggests that teachers should focus more on the shifting and emerging third place of the language learners themselves, but less on fixed cultural identities on both sides of national borders. The texts that learners speak and write have to be considered not only as examples of grammatical or lexical practice or the authors' thoughts, but also as situated otherness contributing to the construction of particular cultural contexts.

Furthermore, Kramersch (1993: 205-206) proposes an examination of four aspects of new ways of seeing the teaching of language and culture:

- (1) Establishing a 'sphere of interculturality' - it is not a transfer of information between cultures but relates C1 to C2 and reflects on the differences between C1 and C2.
- (2) Teaching culture as an interpersonal process - it replaces the presentation prescription of cultural fact methodology and moves toward a process of rather understanding foreignness or otherness.
- (3) Teaching culture as difference - culture should not be viewed as only national traits; many other cultural factors such as age, race, gender, regional origin, ethnic background and social class should be considered.
- (4) Crossing disciplinary boundaries - teachers should broaden their readings besides literature and have some understanding of a wider range of subjects such as sociology, ethnography, and sociolinguistics. If this process of acquiring culture and language works well, learners will not be seen as pseudo-native speakers and can not only use target language to communicate with native speakers effectively but also reflect their personal beliefs and local cultures (Kramersch & Sullivan, 1996). This is a more realistic goal for many EFL learners in contexts outside of the English speaking countries than that of the ideal native speaker model. With this approach, learners and teachers can mediate between cultures, and find a place of their own from which to view both cultures and to make sense of communicating between them in "third places".

Guest (2002: 160) has argued that attempts to identify national characteristics for the purposes of comparing and contrasting cultures may cause oversimplification and stereotypes. These problems illustrate some difficulties in culture teaching; however, they do not support avoiding teaching culture directly as Guest proposes. Kramersch (1993) has highlighted the constant conflict between the individual and the personal meanings they may try to communicate and the larger

context of society in which those meanings are expressed. As language teachers and learners, the third place (Kramsch, 1993: 49) urge teachers to consider this range of diversity within culture and that is what this intercultural email exchange is focused on. In the following section, approaches to teaching culture in the classroom will be discussed in more detail.

2.4.2 Approaches to Teaching Culture in the Classroom

This section looks at classroom approaches in terms of teaching intercultural lessons. There are several researchers and scholars who advocate different suggestions and approaches in terms of teaching culture, some of which are already in use in Taiwan. However, email is less frequently used largely because of the high workload experienced by teachers in the secondary school context and also because of lack of understanding of its potential in this area. The question of my study is how helpful is the email exchange project both in improving attitudes to language learning but also in addition to these approaches, especially in teaching culture.

2.4.2.1 Teaching Materials

Culture teaching should take place within the normal language classroom instead of a separate subject or add-on activities. Clarke (1990) suggested that the selection of materials should avoid oversimplifications and stereotypes and be able to encourage learners to take a critical perspective to compare C2 with their own culture. Helping pupils develop their cross-cultural awareness needs to focus on the native culture first instead of concentrating on the C2. Pupils need to recognise that they have a culture before they can become open to new frames of reference.

English language materials drawn from the learners' own culture such as local newspapers can provide a valuable source of cross-cultural materials. Furthermore, Tomalin and Stempleski (1993: 11-13) suggest subjects such as cultural products and symbols e.g. popular architecture, landscapes, culture behaviour including what is viewed appropriate, attitudes, and values, ways of communication e.g. non-verbal communication, and exploring cultural experiences e.g. looking at learners own feelings and experiences of the target culture. In order to apply all of these to the Taiwan education situation, more articles on topics of comparisons between different cultures should be provided. Differences between Chinese holidays and western holidays, such as a comparison of Halloween with the Chinese ghost

month or Western New Year with Chinese New Year or the different values between the West and East should be introduced and discussed with details.

2.4.2.2 Teaching Instructions and Activities

It is suggested that planning for culture teaching should be included as a regular element in the process of culture instruction, so that more effective and efficient integration of culture and language teaching can be achieved. The following are four steps of teaching instructions for building pupils' intercultural communication competence and the classroom examples.

Steps to intercultural communication competence for pupils	Examples
Understanding and awareness of their own culture	Produce a poster or webpage for visitors about their region/country. This should not only describe famous attractions, but may also give visitors advice about what they may find strange or unusual about their own culture.
Awareness of how their own culture is seen from other countries/cultures	Read articles or extracts from books or websites written by people who have visited the pupils' own country or region.
Understanding and awareness of what other people think of their own culture.	Familiarise pupils with sources of information about the target culture with newspapers, websites, films, and literacy texts.
Awareness of how they see the target culture	The non-native teacher can be the person from one culture who has a certain amount of knowledge and/or experience of the target culture. Some pupils with travelling experience can give a written or oral presentation. Pupils without experience can predict the problems encountered and resolve them creatively.

Table 2.4: Four steps of teaching instructions for intercultural communication competence and classroom examples - Adapted from Simon and Michaela (2002)

We should also recognise pre-culture activities to serve a similar purpose in developing cultural awareness and in promoting empathy. Furthermore, Galloway (1999: 166) suggests activities to assist learners to recognise their own culture and the subcultures within it. One activity requires pupils to spend one minute listing everything that constructs their identity (e.g., family, capability, character, physical traits, and education), combining individual responses on the board with tallies kept of the number of references to each to compile a class profile. Learners then make some observations and claim ownership of their own culture's notion of identity. Pupils might discover that no two lists are identical, even if everyone shares the same nationality and this activity gets them ready to respect the variety, Smith (1995) also recommends a "cultural test" activity which helps learners recognise the influence of their culture and reflect on the possibility of alternate frames of reference. Pupils are shown several situations and asked to choose the most appropriate from three possible responses.

2.5 Writing Instruction in English

Having looked at intercultural teaching and learning as a theme in the previous section, we will now look at approaches to teaching writing because of its central importance to this study. Raimes (1993) gives a brief historical framework of writing approaches from 1966 to 1992. She notes that the approaches are never "discrete and sequential".

From 1966	The focus on "form" reinforces teachers' concern for the learning of grammatical structures and contrastive rhetoric. Teachers are not interested in the content or ideas pupils write about but their mastery of linguistic features and "logical construction and arrangement of discourse form.
From 1976	Focus on "writer" leading to the process approach. Teachers have begun to allow their pupils time and opportunity for selecting topic, generating ideas, writing drafts and revisions, and providing feedback.
From 1986	The research on "content" and "reader" started to associate writing with academic activities and the subject matter the ESL pupils are studying.

Table 2.5: A brief historical framework of writing approaches from 1966 to 1992

Before the early 1970s, researchers and educators focused on the importance of the products written by pupils. Writing was considered a cognitive process and the writing instruction centred on a writer's cognitive development process (Emig, 1971). During the 1970s and 1980s, writing was viewed as a social and cultural development instead of merely a cognitive process. Silva (1990) proposes four most influential approaches in ESL writing research: controlled composition, current-traditional rhetoric, the process approach, and the English for academic purposes. And these four can be categorised as two types of approaches: process approach and product approach. The first two approaches, controlled-composition and current-traditional rhetoric are product-based, which overlook the communication of meanings and pupils' composing processes and dominated writing instruction until the 1960s.

From the 1970s, writing has been defined as a process of discovering ideas and problem solving and creating multiple drafts for different functions, such as generating, clarifying, rearticulating, and refining ideas (Zamel, 1983, 1987). It aims at studying and replicating textual models; the process approach contains multiple and repeated steps that compel the writer to closely consider the topic, language, purpose for writing, and social reality of an audience (Boas, 2011: 26). The emphasis of writing instruction has shifted from the product to the process.

The difference between the product writing and process writing can be summarised as follows in table 2.6.

Product writing	Process writing
imitate model text	text as a resource for comparison
organisation of ideas more important than ideas themselves	ideas as starting point
one draft	more than one draft
features highlighted including controlled practice of those features	more global, focus on purpose, theme, text type, i.e., reader is emphasised
individual	collaborative
emphasis on end product	emphasis on creative process

Table 2.6: The difference between the product writing and process writing - adapted from Boas (2011)

Process-driven approaches have similarities with task-based learning, in that pupils are given considerable freedom within the task. Pre-emptive teaching of lexical or grammatical items does not curb them. However, process approaches do not repudiate all interest in the product, (i.e. the final draft). The aim is to achieve the best product possible. What differentiates a process-focussed approach from a product-centred one is that the outcome of the writing, the product, is not preconceived. The writing approaches reviewed in the following sections will focus more on the implication of the process approach.

2.5.1 Process Approach toward Writing

The Pupils with various linguistic capabilities in EFL/ESL classrooms have been a challenge to most of the language teachers. The reluctance from the pupils with low proficiency in foreign/second language involves numerous factors, such as lacking the linguistic competence, experience, and preparation time. Furthermore, different affective factors need to be taken into consideration. In order to increase more opportunities for the pupils with weaker communicative competence and lower learning anxiety to participate in the learning, the researcher tried to bring process writing into this intercultural email exchange project after the fourth week of the study.

There are different variations on how to implement the process approach in writing; however, they share the basic principles of prewriting, peer and teacher feedback, and revision (Ferris & Hedgcock, 2005) and focus more on various classroom activities such as brainstorming, group discussion, and re-writing. An implied typical procedure is as Hedge (2005: 51) suggested in Figure 2.6.

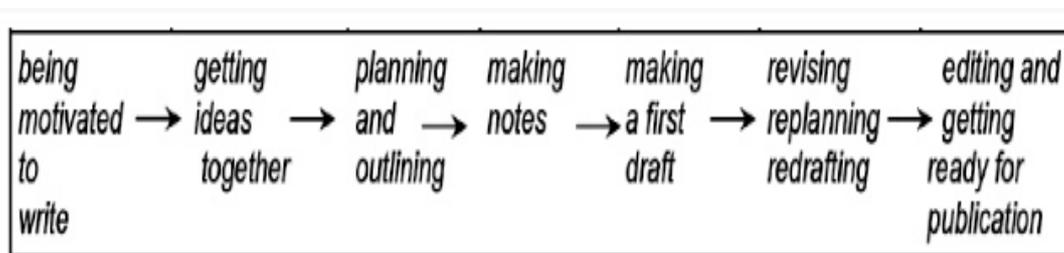


Figure 2.6 – Stages involved in process writing (Hedge, 2005: 51)

Figure 2.7 below shows the complex and recursive nature of writing and the interaction between the different operations that may occur simultaneously (White & Arndt, 1991: 4; Hedge, 2005: 50).

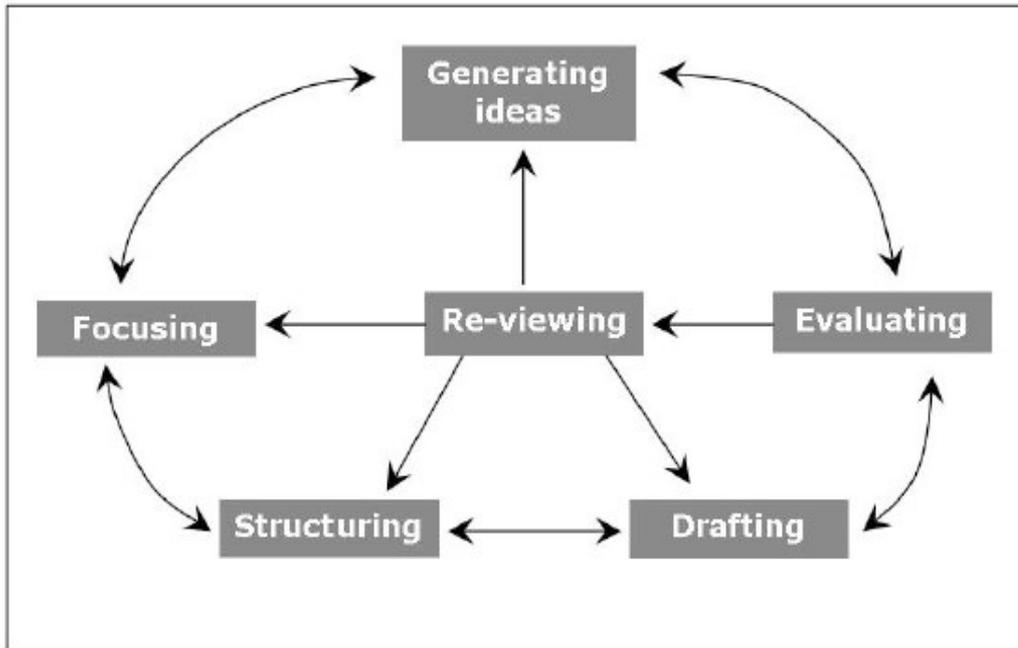


Figure 2.7: A model of writing (White & Arndt, 1991: 43)

Table 2.7 below demonstrates the specific procedures through the five steps of the writing process. It was Adapted from Ferris & Hedgcock (2005) and summarised by the researcher.

Step1	Prewriting (think)	Decide on a topic to write about. Consider who will read or listen to your written work. Brainstorm ideas about the subject. List places where you can research information. Do your research.
Step2	Drafting (write)	Put the information you researched into your own words. Write sentences and paragraphs even if they are not perfect. Read what you have written and judge if it says what you mean. Show it to others and ask for suggestions.
Step3	Revising (Make it better)	Read what you have written again. Think about what others said about it. Rearrange words or sentences. Take out or add parts. Replace overused or unclear words. Read your writing aloud to be sure it flows smoothly.

Step4	Proofreading (Make it correct)	Be sure all sentences are complete. Correct spelling, capitalization, and punctuation. Change words that are not used correctly. Have someone check your work. Recopy it correctly and neatly.
Step5	Publishing (Share the finished product)	Read your writing aloud to a group. Create a book of your work. Send a copy to a friend or relative. Put your writing on display. Illustrate, perform, or set your creation to music. Congratulate yourself on a job well done!

Table 2.7: The five steps of the writing process

The process approach is a cyclical, non-linear, exploratory, and generative process (Zamel, 1983). Teachers and writers may focus on different issues such as content, organization, or grammar at different stages of the writing process (Seow, 2002). Some features of this approach differ from previous writing approaches. For instance, a teacher of process approach responds to pupil writing during the process of writing not merely at the final stage of composing stages as in a traditional writing class (Seow, 2002). In a product-based approach, pupil writing focuses on accuracy of grammar, diction, and linguistic mechanisms all the way through. As soon as the texts are submitted for teacher evaluation and correction, pupils often feel it is unnecessary to further correct or revise their final texts again. Feedback should be given throughout the composing processes (Zamel, 1987) because the feedback, no matter from instructors or peers, may be the most significant to writers (Ferris, 2003). There are three main types of feedback: written teacher commentary, peer feedback, and oral teacher-pupil conferences. Although the three types of feedback have been confirmed to be beneficial, some researchers have investigated which type would be more beneficial to pupils (Zhang, 1995).

However, the process approaches are criticised for causing linguistic inaccuracies (Zamel, 1983). The study of Zamel (1983) shows that too much focus on meaning alone kept pupils from carefully examining certain surface features of writing. In response to this drawback, Ferris (2002) developed an editing process

approach in an attempt to help pupils reduce their linguistic errors. The researcher proposes three principles: (a) finding major patterns of error; (b) personalising editing instruction; and (c) focusing on only frequent, global, and stigmatising errors. Besides the language errors, pupils also have to correct errors in global content and organization of ideas (Seow, 2002). Furthermore, teacher education on writing instruction to provide pupils appropriate assistance needs to be addressed.

2.5.2 Writing in Computer-Mediated Communication (CMC)

In the previous section about social cultural theory, attention was drawn to Vygotsky's (1978: 3) view that all learning is inherently social in nature. His theory implies that writing arises out of, and retains the functions of, social uses of language because it involves more than inscribing words. Writing is a social practice that interweaves into larger social practices and it is also a linguistic process that relies not only on knowledge of vocabulary and grammar, but also on wider aspects of spoken and written languages. Moreover, writing is a cognitive process that involves creating links between our knowledge and textual forms and on-going critical assessment of the quality of those links. In a word, writing is seen as a dynamic set of social, linguistic and cognitive processes that are culturally motivated (Kern and Warschauer, 2000). Writing is situated within computer networks, in Computer Mediated Communication (CMC). According to social-cultural theories, learning to write means being socialised into a set of values, practices and symbol systems; texts are cultural artifices and the activities involved in creating texts are group-specific rather than universal practices (Dyson 1993: 79-82; Heath, 1999: 5-9).

With their focus on context and text, sociocultural theories emphasise communication and thus involve linking writing closely with speech, reading and practical activities. Although some researchers focus mostly on literacy practices, sociocultural theory has generated the notion of "genres" as text forms that carry cultural norms (Cope & Kalantzis, 1993: 14). In addition, writing in the context of CMC where audiences are part of dynamic textual interactions, might help writers generate salient topics and learn strategies for getting readers' attention. Such contexts also raise issues of interpersonal and intergroup relations around specific texts. Therefore, sociocultural explanations apply most readily to CMC.

In order to have further understanding of how to use technology to facilitate English learning, the following section will firstly provide a brief review of how

computers can assist language learning and then focus more on email use in the current study. The importance of integrating new technology by means of using computer-mediated communication (CMC) into classroom instruction will be discussed. Following the general discussions of the benefits of using CMC as seen in previous studies the last part of the section gives a rationale for the project and in particular for considering the use of a keypad in the present study.

2.6 Computer-Assisted Language Learning (CALL) and Computer-Mediated Communication (CMC)

“Computers have become so widespread and their uses have expanded so dramatically that the majority of language teachers must now begin to think about the implications of computers for language learning.” – Mark Warschauer (1996b: 3)

2.6.1 Introduction of the Development of CALL

Computer-Assisted Language Learning (CALL) has developed gradually and increased in popularity since the 1960s. Warschauer (1996) divided the development of CALL into three chronological phases: behaviouristic CALL, communicative CALL, and integrative CALL. The development also corresponded with the development of language teaching methods and approaches from three perspectives seen as follows:

(1) Behaviouristic CALL: It began in the 1960s and continued into the 1970s. This stage corresponds to Audio-lingual Approach for EFL/ESL learning from a structural perspective. It was based on B.F. Skinner’s behaviourist learning theories (1957) focusing on learning through stimulus, response, reinforcement and repetition. The assumption was if learning could be reduced to its lowest common denominator, language could effectively be taught as a sense of pre-planned, discrete steps. The computer became a tutor to provide precise software for teaching, feedback, and exams regarding the four language skills for specific drills and exercises (Warschauer & Kern, 2000). The structural role of the computer concentrated on providing limitless practice, tutorial assistance, and feedback.

(2) Communicative CALL: It began in the late 1970s and lasted until the early 1980s. This stage corresponds to Communicative Approach for EFL/ESL learning from cognitive perspectives. It was based on Krashen’s (1982) hypothesis that

grammar should be acquired naturally by assimilation of linguistic data process from comprehensible input if emphasis were focused on communication. The interaction was done through computers to serve for groups of two to three learners in a realist, contextualised setting, and the communicative function of language learning was taken into account in the learning materials. The activity was designed for social interaction. Language teachers began exploring ways for pupils to communicate in authentic environments, rather than pre-planned, non-contextualised lessons. The computer became the stimulus that allowed access to audio and visual reference materials of language and culture to enhance pupils' use of the target language to produce messages for interaction (Warschauer & Kern, 2000). The cognitive role of computers was emphasised in the supplying of "language input and analytic and inferential tasks" (Warschauer & Kern, 2000: 13)

(3) Integrative CALL: It began in the late 1980s and continues to the present (Levy, 1997). It was still based on the CLT approach but from a socio-cognitive outlook on English instruction (Warschauer & Kern, 2000). This stage corresponds to the development of the multimedia and Internet. The computer served as a learning tool to provide the opportunity for interactive communication, chatting, recreation and distance learning (Warschauer & Kern, 2000). It was used more widely and incorporated into the curriculum, offering diverse materials for learning, class activities, communication, and a means to convey opinions. The socio-cognitive role of computers is accomplished through their ability to offer an environment for discourse and to facilitate communication. Telecommunication activities through various types of applications, such as email and Internet, were involved with integrative language learning skills and collaborative activity, and build up a rapport between the message sender and receiver, and the context of authentic situation.

Behaviouristic CALL emphasised repeated practice-drill exercises as the main language learning elements and Communicative CALL only provided interactive communicative activities with the computer which lacked a vital part to language learning, pupil-centred learning. Kenning and Kenning (1990: 90) criticised that CALL itself contributed "marginal" elements of language learning instead of the core requirements of language education. The reflection led to integrative CALL where computers were generally used with other media tools.

In the 1990s, Internet use was widespread and offered an alternative method of language learning. It allowed learners to connect with other people in the pursuit of

a common learning goal, and share interests and experiences in an interactive way (Oxford, 1990). The Internet offers “other channels of communication between class members and distant learners” (Brierley & Kemble, 1991: 4). The combination of computer and network media provides different resources and information that can help to change traditional teacher-centred instructional methods. To sum up, the focus of language teaching instruction has shifted since the 1960s from the improving of grammatical structures to the teaching of communicative ability. Comprehension has been valued more, and providing comprehensive input has become a key issue in pedagogy. Creative self-expression has been emphasised more than recitation of memorised dialogue. Negotiation of meaning has been valued over structural drill practice. It is in the context of these diverse changes that computer-assisted language learning (CALL) has come of age (Warschauer & Kern, 2000). Table 2.8 provides a thorough comparison of all of the changes thus far discussed.

Stage	1970s-1980s: Structural CALL	1980s- 1990s:Communicative CALL	21st Century: Integrative CALL
Technology (History of computer development)	Mainframes	PCs (personal computers)	Multimedia and Internet, Networked computers
English-Teaching Paradigm	Grammar-Translation and Audio-Lingual	Communicate Language Teaching	Content-Based, ESP/EAP
View of Language	Structural (a formal structural system)	Cognitive (a mentally constructed system)	Socio-cognitive (developed in social interaction)
Principal Use of Computers	Drill and Practice	Communicative Exercises	Authentic Discourse
Principal Objective	Accuracy	Fluency	Agency
How is language understood to develop?	Through transmission from computer users. Internationalization of structures and habits through repetition and corrective feedback	Through the operation of innate cognitive heuristics language input.	Through social interaction and assimilation of others’ speech.

What is the role of computers?	To provide grammar and vocabulary tutorials, drills, practices, and immediate feedback	To provide language input and analytic and inferential tasks; learners use their existing knowledge to develop new understanding	To provide alternative contexts for social interaction; to facilitate access to existing discourse communities and the creation of new ones
Crook's metaphor of CALL	Tutorial metaphor (computer-as-tutor)	Construction metaphor (computer-as-pupil)	Toolbox metaphor (computer-as-tool)

Table 2.8: The three stages of CALL (Based on Warschauer, 1996; Warschauer, 1999a; Warschauer & Kern, 2000)

Following on from the usage of CALL, the next section focuses more on Computer-mediated Communication (CMC), which is much more of an ideal fit to this study.

2.6.2 Computer- Mediated Communication (CMC)

Computers combined in networks produce the occurrence of Computer-mediated Communication (CMC). CMC is the broad term that refers to communication carried out between more than two participants interacting via the computer in the form of text or audio (Warschauer, 1995). The advantage of CMC through the Internet is that users can ask questions, negotiate, and improve their language abilities in order to communicate with other users all over the world without boundaries of time and space. Internet transforms traditional language teaching and learning in the classroom and allows pupils to immerse themselves in study not only at school but also outside of class (Crystal, 2001).

CMC is defined as two mediums: synchronous, and asynchronous. Synchronous refers to face-to-face oral communications, which means immediately interacting when participants communicate with each other simultaneously in real time, such as in chat groups, Instant Messenger (IM), and conferencing. Asynchronous refers to time-delayed written communications in which participants communicate through email, discussion forums, text messaging, weblogs, bulletin boards, newsgroup or threaded discussion areas at different times. According to Warschauer (1997: 470), CMC has 5 features as follows: “(a) text-based and computer mediated interaction, (b) many-to-many communication, (c) time-and

place-independence, (d) long distance exchanges and (e) hypermedia links". These features generate a strong network to connect learners and achieve the goal of promoting collaborative learning. Learners engage in collaborative tasks with meaningful contexts by sharing opinions and discussing questions. Among all of the applications in CMC, email communication has been gaining more and more favour and was described as "the mother of all Internet applications" (Warschauer & Meloni, 2000: 3). It has been shown to have the potential to have a great impact on language teaching and learning with regard to both linguistic (Stockwell & Harrington, 2003) and cultural elements (Gray & Stockwell, 1998).

Until the middle of the 1990s, the activity of cross-cultural email exchanges facilitated by language instructors from different countries was a major application of CMC to EFL teaching. A lot of research has been done on comparing participation of class members, collaboration of language learners, and interaction of pupils between the computer-assisted setting and the face-to-face classroom (Warschauer, 1996). Some well-known web sites that offer matching services of email exchange to enhance pupils' language skills include IECC and International Email tandem network. Keypal exchange projects have been popular in the past few years. However, Ferris and Hedgcock (2005: 345) reminded us as follows,

"Computers cannot teach novice writers how to think, plan, or revise nor can they magically transform inexperienced writers into proficient writers- or replace teachers' roles in providing instruction and feedback. Nonetheless, computers can make many dimensions of the writing process easier, rendering writing more enjoyable, improving pupil attitudes, and reducing anxiety about writing, particularly among ESL writers."

Therefore, the current study has a comprehensive literature review on email communication empirical studies in Taiwan and abroad to give the understanding of the application in depth. The advantages of utilizing emails as a tool will be examined and previous empirical studies will be reviewed. Furthermore, pupils' difficulties encountered and some suggestions for instructors will be identified.

2.7 Email

Since the 1990s, a growing number of research studies have been exploring the effects of utilizing email from diversified perspectives of language learning based on various methods. Numerous teachers from different countries have been

cooperating to extend pupils' learning with language learners in distant classes through intermediary organizations for locating keypals and partner classes, such as IECC (Intercultural Email Classroom Connection) (<http://www.iecc.org>), kidlink (<http://www.kidlink.org>), Keypals Club from Teaching.com (<http://www.teaching.com/keypals/>), Rigby/Heinemann Global Keypals (<http://www.hi.com.au/keypals/>), and ePals (<http://www.epals.com>).

A body of research has investigated the impact of integrating email exchanges into EFL/ESL learning at different levels. Robb (1996: 8) claimed that an electronic penpal or so-called 'keypal' is an inspirational way for pupils to obtain valuable practice to enhance reading and writing skills, to motivate pupils towards the target language and culture learning and have the opportunity to use the language outside the classroom. Guided by the research issues as previously mentioned in chapter one, the reviews in this section will present the advantages and disadvantage of email communication, and then mainly focus on related empirical studies about the effects of email use in language classrooms in terms of promoting the motivation, enhancing linguistic skills, and developing culture learning. Lastly a summary of difficulties encountered by the teachers and pedagogical implications of email exchange projects will be provided.

2.7.1 Email as a Genre

Email exchanges have been viewed as a collaborative socio-cultural practice that learners can learn through guided participation in dialogue to adopt certain roles, problem-solving methods, and different values (John & Mahn, 2001). As discussed in the earlier section, the Vygotskian (1978) framework provided a theoretical framework for email exchange since it is a medium of social interaction—an ongoing dialogue involving collaborative construction of text. The arguments for using email to teach writing often highlight the social interaction email fosters, citing the value of communicating with a real audience and getting feedback through reply messages (Bowen, 1994).

As a genre, email follows rules for style and conventions that are different from the norms for handwritten letters. Garner and Gillingham (1996) defined that email is a hybrid genre. It complicates the traditional distinction between oral language and written language. As written conversations, email messages reflect abbreviated language in an informal way and are generally less explicit and elaborate

than traditional written text due to the assumption of shared involvement and immediacy (Crystal, 2001; Garner & Gillingham, 1996). It means that email is a half way between 'real' writing and the text. Email writing is a little bit more formal than texting, but less formal than the normal letters. Therefore, Tannen (1982: 2-4) warned that due to lacking the paralinguistic and kinetic channels available compared to face-to-face interactions, email writers need to encode the meanings through lexis and syntax. It also increases the detachment of writing and focuses readers on content. However, writing contains various features that can convey meaning non-verbally like gesture and intonation. Significant meanings may be imparted to texts, for example, "scarequotes", underlining, **boldface**, exclamation marks!!!, and emoticons, such as a smiley face :-), can signal writers' attitudes to their propositions (Hyland 2002: 52).

Since communication and rapid feedback are intrinsic to email, it is essential to develop audience awareness (Bowen, 1994; Garner & Gillingham, 1996). The speed of email communication may result in messages being viewed like talk, rather than written text (Garner & Gillingham, 1996). Due to the different genre, the email etiquette, netiquette, and the language rules of email writing should be taught. The clarification between email writing, instant messaging or texting should be made. Pupils would transition instant message or text to email writing. Forms such as "u", "ur", "cus," with regular grammar rules will be found in the writing. When texting a message the meaning can get across in fewer characters but with slang and inappropriate spelling. And it may need to be clarified. Furthermore, the email voice should be taught. Due to the limitation of not seeing the facial expression, the short and concise email message might be misinterpreted as being rude or abrupt. Therefore, how to create an appropriate tone in an email should be taught. And learners need to realise what is appropriate on the web when sending messages to other people (Goett & Foote, 2000) with suitable language and graphics used. For example, it is considered quite rude to write sentences / words that have been capitalised as they seem to be shouting at the reader. Further, when people comment on others work / ideas it is difficult to know the tone of the sender, which may often be taken in a negative way and considered as offensive, inflammatory etc. (Bloch, 2002). The core of the Email netiquette needs to be emphasised.

2.7.2 Pedagogical Benefits of Using Email as an Interaction Tool

Among all of the CMC applications, email has been used by EFL/ESL teachers as an instructional tool and a means of communication. Warschauer (1995: 2) emphasised three crucial reasons to utilise email in English classrooms as follows: (1) it provides pupils an opportunity for real and natural communication; (2) it empowers pupils to learn independently, and (3) it enriches the experiences of teachers. Email communication incorporates several language acquisition principles, for instance, the capacity: to have a natural authentic language environment with a real audience; to promote communication among peers; to allow correction to be independent from communication; to treat network communications as experiential learning activities and to allow socialization and communication to occur (Kelm, 1996). There are various ways to incorporate email in to language instruction, and the two main methods are electronic dialogue journal between the teacher and pupils; and cross-cultural email projects. Email has benefits not only for pupil-teacher interaction in a single class, but also for English learners with native or target language learners to gain cross-cultural knowledge and writing practice. The opportunity for more independent learning and easier way of communication with others around the world is essential and meaningful for EFL/ESL learning. As Warschauer (1995: 68) demonstrated, “the real power of learning through email and computer networking lies not merely in more convenient distribution of information but in helping build socially collaborative communication in the classroom”. Furthermore, email provides the teachers with more authentic teaching situations to teach effectively and leads pupils to a new world of experience with different opportunities for information, communication, and collaboration. Tao and Reinking (1996: 10) have summarised six features of email as follows: text-based nature; multiple connections and easy transmission; asynchrony and synchrony; easy storage and manipulation; rapidity and cost-efficiency; relative anonymity. Based on the literature review, there are several more reasons to incorporate email in an EFL/ESL class.

(1) The ability to connect quickly, cheaply, and diversely: email offers an easy, inexpensive and convenient means of communication with fast feedback compared with other applications of communications, such as fax, and traditional postal services. It is also significantly less expensive than long-distance telephone communication (Warschauer, 1995). In term of diversity, email can transmit various types of media, such as voice, video, and a large amount of text with minimal effort. Furthermore, it

allows pupils to communicate with native speakers of the target language without the time and expense of traveling abroad (Roakes, 1998). It was impossible to communicate so frequently and immediately with others before the advent of the Internet.

(2) It extends time and place for the language learning: email provides pupil-pupil, teacher-pupil interaction at their convenience and it is time and place-independent. (Belisle, 1996). Pupils can log on to conduct the communication in any place they like instead of staying in one single room at a certain time. Compared with other synchronous CMC such as online chatting and instant messaging, which rely on the urgency of communicative flow, the asynchronous nature of email communication allows learners to take time to process linguistic input and produce more complex language. Email creates a “conversation in slow motion” (Beauvois, 1997) and it allows pupils more time for preparation as well as in-depth reflection (Warschauer, 1997). Pupils can control their own pace, and have time to think, respond, monitor and edit their message carefully by making use of language related resources before sending (Absalom & Marden, 2004) and it is not easy to achieve this in the traditional classroom setting due to time and situation restraints. Rankin (1997) echoed that the additional function from email provides EFL/ESL learners with more input than they would expect from class time. Moreover, teachers can save class time by emailing assignments to the pupils and monitor their progress with the return receipt capabilities of email. It is a crucial feature to assist in monitoring pupils’ progress (Belisle, 1996).

(3) It provides a context for real-world communication and authentic interaction: Warschauer (1995b) noted that writing to pen pals electronically has many advantages: using the target language for an authentic purpose, making new friends, and learning about a new culture. Interaction via email creates a feeling of reality for pupils’ communicative efforts and provides an authentic purpose and audience for writing (Gonglewski & Meloni, 2001). Those are elements often lacking in the writing assignments in traditional writing classes. Paired up with native-speaker keypals, EFL/ESL pupils can benefit from their partners’ writing, which forms a good scaffolding to enhance their language learning (Boyd & Chang, 1994/1995). Communication via email creates an authentic situation for written communication, in which pupils interact with each other, sharing ideas and exchanging information and feedback to improve their own writing.

(4) It promotes pupil-centred learning: email allows communication between pupils in a context where the teacher's role is no longer at the centre (Patrikis, 1995) and learners can experience control over their own learning from choosing the topics, changing the direction in the discussion with their keypals.

(5) It focuses on writing process and communication: email provides learners opportunities to focus on the learning process itself because pupils' writings could be saved in the computer for later reference (Warschauer, 1997), planning, drafting, revising and editing. Teachers can monitor pupils' writing process from the brainstorming phase to the final draft with email software by organizing assignments based on pupils' names, date received, or by project name. This facilitates teachers to analyse pupil or group work more easily and effectively and also see the pupils' writing progress. Furthermore, pupils themselves can use the same features to organise their writing and this facilitates them to focus more on the tasks of communicating and collaborating with peers. Furthermore, pupils may learn to perceive writing as a process and understand that writing can be a way of thinking. (Belisle, 1996)

(6) It encourages equal opportunity participation. Many researchers have discovered that through email discussion activities, every pupil's opinion is heard, and this is something that does not always occur during oral discussions or face-to-face communication, especially when some pupils are timid or shy. (Belisle, 1996). Shy pupils appear to be much freer and feel less threatened about expressing themselves on-line than they do in class or when meeting their teacher privately.

(7) Familiarizing computer literacy: keypals (computer keyboard pen pals) are the modern manifestation of traditional pen pals. Instead of using the pen, keypals use computer keyboards as their communication tools to be paired or grouped with others of similar age or interest (Hopkins, 1999). Through email, pupils may become more familiar with computer literacy and using a communication tool that is essential in the 21st century (Fedderholdt, 2001); email becomes a convenient medium for cultivating pupils' language, communication, and keyboarding skills.

(8) It provides self-reflection: email, the text-based form of CMC can be easily "transmitted, stored, achieved, re-evaluated, edited, and rewritten" (Warschauer, 1997: 472). It not only allows learners to communicate interactively, but also provides the reflection and later retrieval. The conversational and informal style in email communication can encourage the pupils in email dialogue journaling to write more

than paper-and-pencil dialogue journal, which pupils tend to view as formal writing (Warschauer, 1997).

This is an impressive list of claims about email. However, it is easy to become carried away with its advantages. Therefore, it is necessary to look at more empirical studies. There has not been much work completed in a secondary school setting. Since 1998-2008, there were only a small number of studies undertaken in secondary school and the rest of the studies mainly focused on the college/university learners. Considering the advantages of email as a tool of communication and instruction as well as a writing medium for EFL/ESL learners, the following section will focus on empirical studies related to the integration of email into an EFL/ESL class with more detail. The disadvantages or difficulties of email communication will be provided in a later section.

2.7.3 Empirical Studies about Email Promoting Learning Motivation

Numerous EFL/ESL researchers claim that pupils can learn more efficiently if they are in situations where they feel comfortable and less stressful. As mentioned in section 2.2.2, Krashen (1982) pointed out that pupils' affective filter increases; and their learning tends to be less successful when they are in uncomfortable environments. The best language acquisition will occur in situations where anxiety is low because that is where the affective filter is low. Warschauer (1996b) indicated that pupils' motivation was increased when the teachers integrated computer use into the regular structures and goals of the course and learners' anxiety became lower during email exchange interaction because it allowed them to write at their own speed and in their own time.

In line with the same idea, Aitsiselmi (1999) claimed in his email project between the learners and tutor that the affective filter is at its lowest when the activity was voluntary and the learners were not evaluated on the formal correctness of their language output. Furthermore, the tutor met up with the learners regularly to establish the relationship of trust with the pupils to make willing correspondence happen. Pupils gave positive feedback and some found pleasure in email writing because they treated it as a form of informal chat in a comfortable learning situation. The bonding between the learners and the instructor was also stressed by Sabieh (2002) and Stockwell and Levy (2001). The latter further noted that the bond was related to email sustainability. In this way, the role an instructor plays in email communication seems

to have influence on the learners' behaviour. Meanwhile, the role of the teachers in email communication was crucial in influencing the learners' behaviour and let them have the desire and motive to achieve more.

Warschauer et al (1994) explored ESL pupils' participation in electronic discussions through comparing it to face-to-face (F2F) discussions. The findings suggest that pupils preferred participating in email interaction, especially shy ones (Sabieh, 2002). Pupils with weaker communicative competence were often found reluctant to give their voice in the classroom.

There are several factors involved in the reluctance to learn language such as lack of preparation and experience aside from weak linguistic competence. Pupils with lower language proficiency are mostly afraid of making mistakes, are short of confidence and became intimidated and anxious about the judgmental feedback that might come from the advanced peers. In the faceless environment provided by email communication, pupils with the inhibition and fear of being on the spot become motivated to participate and are more willing to express themselves and take risks than in face-to-face conversations (Belisle, 1996; Liaw & Johnson, 2001). Based on the findings, email provides diverse learners the opportunity to communicate in ways more suited to their needs and styles, something that a traditional classroom struggles to achieve. Hoffman (1996: 55) concluded that the "anonymous quality of network communication can be face-saving as well, relieving learners of the inhibitions associated with face-to-face communication and allowing them to express themselves more freely".

2.7.4 Empirical Studies on Email Improving Pupils' Linguistic Skills

Although the improvement of linguistic skills was not the main focus of my study, (which focused on attitude) it is important to review some of the research in this area. Email was considered to be an efficient instrument for improving EFL/ESL learners' linguistic performances including reading, writing and communication. Most researches related to email have revealed that email interaction between native and non-native speakers is a powerful motivator to promote target language learning. Frizler (1995) reported in his non-native speakers' online EFL composition class that the learners' ability and confidence improved after the eight-week course using Internet and email. Florez-Estrada (1995) also explored language proficiency in the email writing context in two groups of pupils. The findings indicated that the

computer users performed better than the non-computer users in grammatical sentences and depth and breadth of the writing content. The researcher discovered that the most significant difference was the amount of time spent by computer users on their writing compared to non-computer users. Having different audiences for them to write to was the other crucial result in their language performances. Vinagre (2005) conducted an English-Spanish email exchange project between undergraduate pupils in Madrid and in the US. The two major benefits gained during the exchange were improvement in vocabulary and writing skills. What the pupils enjoyed the most were the acquisition of useful vocabulary and the opportunity to experience authentic interaction with native speakers.

Due to the nature of Email with a text-based form, users need to type or produce the message, which creates a fertile environment for second language acquisition. That is “comprehensible output” (Swain, 1985) as discussed in the previous section. It also echoes “Interaction Hypotheses” (Long, 1985) that learners have an audience for their linguistic output so that they can construct meanings for communication rather than solely for practice (Chapelle, 1998). To create an authentic purpose and audience for her process-oriented ESL writing class, Li (2000) investigated the efficacy of integrating task-based email activities into a process-oriented ESL freshman writing class. She found that in email tasks involving audience interaction, pupils tended to produce syntactically and lexically more complex texts, and in tasks that also allowed pupils self-selection of topics and content, pupils also tended to use more complex sentences and richer and more diverse vocabulary.

Sabieh (2002) conducted another study to investigate the influence of 8-weeks of email on thirty ESL learners in a remedial class at a private university. There were two groups of pupils: an email group and a face-to-face communication group. The results showed that participants in the email group had higher self-confidence, were more active and motivated in target language learning compared to the face-to-face group, who were more passive and experienced more peer pressure than the email group. Furthermore, email writing offers a chance for learners to notice a gap between themselves and the audience. The linguistic problem in their existing language capacity might be triggered by their internal self-awareness or by external feedback from teachers or native speakers as in the exchange projects.

In Torri-Williams’s (2004) and Absalom and Marden’s (2004) cases, learners consulted resources to fill the gap in linguistic knowledge or modified the

output. Some pupils said that they looked up words in the dictionaries and they learned new expressions. Therefore, the syntactic mode of processing helps learners internalise new forms and even improve accuracy of their existing grammatical knowledge. The use of the target language becomes an end in itself for the learners engaging in the email tasks, and it is generally believed to be an indicator of and a necessary condition for successful second language acquisition.

A teacher-pupil email dialogue journal is also an effective way to foster pupil reflection and writing practice and has been widely used as an instruction tool in EFL/ESL classrooms. An email dialogue journal is a daily written communication between two people (Wang, 1998) and the journals usually take place out of the classroom when pupils have the confidence and language ability to write emails to their instructor or their peers. Review has shown email dialogue journals to be beneficial for EFL/ESL reading and writing skills, as well as to enhance communication between teachers and learners. Warschauer (1997) reported that Singaporean and Canadian teenagers were dedicated to communicating through email with each other and used clear prose for their concepts and thoughts. At the end of the project, all participants believed that email could be a learning and communication tool.

Wang (1996) also conducted a 9-week case study to investigate the difference between two groups writing their dialogue journals to their instructor; one group used email, and the other used pen and paper. Most of the email participants showed a positive attitude in their dialogue journals. Moreover, email dialogue journals provide another example of how Emails facilitate improvements in writing in syntactic complexity, grammatical accuracy and lexical density in an EFL setting. A study on 40 intermediated-level pupils of an English writing class was conducted by Shang (2007) at a university in Taiwan to investigate the relationship between the level of writing performance and the number of email exchanges. The findings indicated that pupils made improvements in their writing in terms of syntactic complexity and grammatical accuracy, especially when the number of emails exchanged with their peers became greater. The pupils' self-appraisals show that the email approach is a useful strategy for learning a foreign language and gaining a positive attitude towards English.

However, not all of the studies provided an objective assessment of improvement in language proficiency through email exchange. To make learners'

writing genuine communication, instructors may prefer not to grade the email assignment as they usually do.

Email exchange represents a form of collaborative peer interaction, and thus creates an environment “to learn language, learn about language, and learn ‘through’ language” (Warschauer, 1997: 471). The linguistic forms are incorporated in meaningful communication with either in-class peers or native speakers from various cultures and thus become the tool for social interaction. Such communicative context makes pupils aware that what they write is not for correction by teachers, but to share their thoughts with peers, the real audience. The collaboration also contributed to the cross-cultural understanding and this aspect of the use of email will be discussed more in the following section.

2.7.5 Empirical Studies about Email Raising Target and Local Cultural Awareness

Email exchange projects have been widely added to the language classroom in order to increase the authentic interaction between pupils from different locations. As Brown (1990: 13) emphasised “language and culture are intricately intertwined”, language cannot be separated completely from culture and email is useful for EFL/ESL learners to acquire authentic culture that is hidden in language (Hinkel, 1999). Kitao and Kitao (1997) claimed that email exchange between keypals offers pupils exposure to other cultures and provides the opportunity to improve cultural understanding of the target language. Keypals are not only a good opportunity for pupils to practice English, but also a fun way to learn from other cultures, to share their own culture, and to get real communication.

Frizler (1995) reported that most of his EFL adult pupils mentioned intercultural interaction as a major benefit of learning to write online during the interviews. Furthermore, his pupils revealed that intercultural interaction could educate themselves and others about people and cultures outside of their native surroundings as a way of preventing the perpetuation of false stereotypes. Fedderholdt (2001) conducted cross-cultural email exchange projects for her EFL college pupils, and reported that having direct contact with overseas keypals allowed her pupils to discover different cultural settings in a natural way, and that being confronted with aspects of another society enabled them to go beyond the basics of comparisons and differences. Furthermore, the email exchange also created an

opportunity for them to examine their own culture in the light of a broadened perspective. She pointed out (Fedderholdt, 2001: 276) that their overall function here, however, is to show that often pupils only know very basic or stereotypical things about another culture, and that projects such as the one described here can provide them with a wealth of impressions as well as knowledge, and this can be expected to happen whichever nationalities are participating.

Wang (1998) conducted a computer-mediated cross-mediated cross-cultural exchange project to investigate Taiwan college participants' cultural awareness. She reported that the pupils held a positive attitude toward computer-mediated cross-cultural exchanges, and that their cultural awareness was enhanced through communicating with Japanese and American pupils. However, research on using cross-cultural email exchange projects to teach language to pupils at the high school level or below is scant. And there were not many papers that used Byram's model in the data analysis. The limitation of these studies is that most research focused on tertiary education or university level learners, and it is still questionable whether the same results could be found amongst secondary school pupils.

Based on the review of the empirical studies abroad and in Taiwan (see appendix), there were few focusing on secondary school level pupils. Tseng (1999) helped his secondary high school pupils exchange their cultural understanding with two ESL groups, one in Canada and one in New Zealand, and one EFL group in Japan through email exchange and the creation of the pupils' own cultural homepages. The finding showed that the secondary high school pupils felt that creating homepages was a more vivid and concrete way to exchange cultural understanding than email exchange, which was restricted by their limited writing abilities. However, it was a two-month study and long-term effect on the pupils could not be shown in such a short time. Ho (2000) reported that her email exchange between primary pupils in Singapore and Birmingham (UK) developed the young learners' sense of awareness of intercultural concerns and of their being part of a dynamic, international, global community. However, she was more focused on the progress of the language proficiency and more intercultural awareness should be addressed.

Email can help pupils develop positive attitudes towards the target language and cultural learning. Hertel (2003) reported on an intercultural email exchange at the college level between Mexican Pupils in an intermediate English L2 class and U.S. pupils in a beginning Spanish class; the pupils emailed weekly for one semester. The

results revealed that in both groups the pupils' cultural attitudes positively changed, and their knowledge and awareness of other cultures increased. In addition, the survey also showed that pupils' interest and motivation promoted L2 acquisition and cultural studies.

In a European context, Sontgens (1999) found that using email can facilitate learners' autonomy and inter-cultural learning through a collaboration email project with pupils in a BA German course at Bolton Institute of H. E, in the United Kingdom (UK).

In support of increased cultural awareness, Edasawa and Kabata (2001) conducted a 10-week bilingual keypal project and investigated the effects of cross-cultural bilingual communication on the pupils' ability to learn a second language. Participants included English-major pupils at Doshisha Women's College in Japan and pupils who were enrolled in an intermediate Japanese class at the University of Alberta in Canada. The goal of the project was to examine whether the project provided pupils with opportunities to learn their target language and aspects of each other's culture, such as their everyday lives as pupils in the university, their society, marriages, and so on. The findings indicated that the pupils' cultural awareness was enhanced and language skills, including vocabulary and writing, had improved by the end of their study. However, in order to save time, peer corrections, such as explicit error corrections, were rarely noted because pupils hesitated to point out any such errors to each other.

Liaw and Johnson (2001: 248) found that an email project between Taiwanese EFL college pupils and pre-service bilingual/ESL teachers in the USA presented an opportunity to learn each other's culture. The result of this study shows how learners' awareness of cultural differences was increased through intercultural email contacts because of their curiosity towards the other person's culture. After pupils' initial exchanges on general cultural information such as holidays, foods, and school activities, they would then "scaffold and help their partners to associate with something more culturally specific" (ibid: 247). Due to both their positive interpretations of cultural differences as well as empathy toward each other, communication obstacles were eliminated. They furthermore pointed out that lacking linguistic proficiency is not the only factor for miscommunication. Cultural acquisition and the awareness of cultural subtleties when communicating with native speakers of English are equally essential. The participants were surprised by the

similarities between the two countries. Through the exchange and discussion, some stereotypes of American people and culture were challenged and a more realistic image of the USA's culture and people started to emerge. It is crucial for the learners to identify and voice their present thoughts and feelings about that culture and their own culture (ibid: 249) in order to appreciate and understand new cultures. In cross-cultural email exchange projects, the participants had interaction with native speakers. This provides learners opportunities to understand the target culture, gain language competence with the linguistic input from the native speakers.

Many studies have found that email exchange projects not only develop relationship with learners in other cultures but also help them obtain cultural information (Jogan et al., 2001), Hertel (2003), Itakura (2004), and Liaw and Johnson (2001) further indicated that email exchange with native speakers enabled the learners to modify existing stereotypes and form new perceptions of the target culture, and “benefit the learners in different ways to develop more sensitive and complex views on culture.” The results of Fedderholdt's (2001) study confirmed that stereotypes towards another culture had been challenged, and both learners were surprised at discovering the similarities and difference between the two cultures. However, if not carefully realised, O'Dowd (2003: 138) cautioned, such intercultural exchange can result in “a reinforcement of stereotypes and a confirmation of negative attitudes”. From some of the responses, it could be argued that stereotypes could be reinforced. In the following section, the disadvantage and the challenges of using email communication will be discussed.

2.7.6 The Disadvantage of Email, Pupils' Difficulties and Suggestion for Instructors

In spite of the positive report from most of the intercultural email exchange projects about enhancing EFL/ESL language learning in different perspectives, some of the studies have also revealed possible problems that pupils encountered when email exchange projects were conducted in classrooms. The suggestion is that careful planning and instructions in advance and thorough preparation on both sides of pupils and teachers are required (Moore & Huber, 2001). Teachers can assist pupils to develop thinking skills in problem solving tasks by designing email activities that elicit inquiry strategies such as questioning, carrying out investigation, interpreting findings and finally presenting the results of the inquiries (Moore & Huber, 2001).

Furthermore, teachers need to bear in mind that effective learning occurs when teachers create a collaborative learning environment where pupils feel part of a safe milieu and are comfortable at participating in asynchronous discussions.

The majority of the empirical studies in Taiwan focus on college/university level with very few on secondary EFL/ESL learners. The arguments against using email takes different forms. Some have to do with practicality in the classroom and some with the learners themselves. Technology is convenient, however, it might be misused. Traditional teachers argue that much, if not all, email writing lies within the low command of English and does not stretch their English competence enough.

As Kern (1996) stated, “email is not, however, a panacea”. Hoffman (1996: 49) also commented “Merely putting language learners in contact with one another is no guarantee that learning will occur”. It is essential to caution that in order to gain positive learning outcome, efforts must be made not only to link learners together, but also enhance language learning for the learners who are engaged in the projects. The CMC alone cannot carry the burden of teaching all language skills given its inherent limitations. The teachers’ roles remain crucial in the classroom with new technological aides since the central component of the educational situation is about interaction between people. Email is merely one of the tools and cannot bring out the learning automatically but it is what the teachers do with the tools that matters (Harris, 1997). Leppänen and Kalaja (1995) emphasised the teacher’s role in cross-cultural exchanges. Even though the learning shifts from teacher-centred to pupil-centred, its various pedagogical functions as well as the role of the teacher still needs to be considered.

Warschauer (1995b) pointed out two major problems with pen pal exchanges: a) lack of response and b) lack of purpose. Based on the studies reviewed, there are still several difficulties or problems that the pupils encountered during the email communication and the pedagogical implications for teachers who plan to implement an email project into their language classroom are listed as follows.

(1) Lack of response: a quick response was a large motivating factor of email exchange and no response or a late response is the most obvious obstacle that contributes to the email exchange projects failing (Warschauer, 1995b; Tseng, 1999; Liao, 1999). Due to differences in educational systems, holidays, timetables, pupils’ absences, interests, personal problems and mechanical problems, pupils might not always receive a fast and frequent response and they

feel disappointed with a late response or no response. It is also difficult for teachers to monitor the work and to provide the same amount of assistance in this situation. Liang (1999) regarded the absence of some response as being inevitable. She therefore suggested that teachers should discuss his possibility ahead with pupils to reduce their disappointment. Tseng (1999) also advised that allocating more than one keypal to one participant or encouraging pupils to write more about themselves may be another way to reduce absent or late responses. Moreover, Tseng (1999) analysed the reason for non-response and attributed this to an unbalanced proficiency level, and the misunderstanding among participants and keypals. Based on the results, he advised teachers to introduce email politeness rules and to guide writing before and during the exchange project. Similarly, Liao X. Q. (2000) found Chinese used more affective language, but they were less polite and proposed the five principle of politeness as follows. (a) if one wants to ask any questions, one needs to provide counter answers in context; (b) one needs to answer all the questions asked by the keypal; (c) one should talk about what was mentioned in the keypal's message if that was not covered in previous email messages; (d) one must talk about some new topics to facilitate the keypal's reply; and (e) one needs to salute properly. Moreover, lack of response could be avoided from the beginning by encouraging the pupils to know more background information about their keypals so that both classes could be more motivated and involved in the project based on mutual understanding. Teachers also need to advise their pupils to respect their keypal partners and to encourage them to develop friendships as the projects progress.

- (2) Time pressure: based on pupils' reflections and interviews, Huang (1999) pointed out that time pressure was one of the largest obstacles for her pupils to learn writing through using the Internet. Different tasks on similar topics required different amounts of time and there was not sufficient time for the pupils to negotiate with their partners in order to require information. This made them feel anxious about completing the project on time (Tseng, 1999; Liao, 2000). Ho (2000) advised that in the first stage of building up rapport between staff and pupils of the two schools, the teachers could be technical facilitators and active mediators to do the actual sending and retrieving of messages for the pupils in order to make the first step go smoothly. Then in a later stage, consolidating the information, the teachers could become involved with revising, editing and

proofreading the write-up of the texts generated. The teachers' management of collaborative learning and the monitoring of the learning process were critical factors for the effectiveness of any information technology based project.

- (3) Limited language ability: the most frequent question related to the pupils' language ability. Frizler (1995) indicated that although the pupils gave positive feedback about using the Internet to learn English, most of them were concerned over their command of English use on the Internet and some beginning learners struggled to keep up with their email writing as well as advanced learners. When EFL learners are young beginning learners, insufficient communicative skills and limited language proficiency could impede their interactions with others. Tseng (1999) echoed the same idea in his email exchange research among his secondary high school pupils. It is harder for pupils to express themselves and understand their keypals' writing with their limited English and that was one of the reasons that his pupils delayed their replies to their keypals. Ho (2000) reported in her study that Singaporean primary ESL learners depended heavily on their teachers to correct their spelling, punctuation and grammatical errors before the messages were sent out. A similar situation also occurred to college learners. Li (2000) stated that pupils' grammatical errors increased when pupils wrote more complicated sentences that demonstrated the complexity of the second language writing process. Kern (1996) indicated that different levels of language ability among the pupils could lead to lower motivation to participate and difficulties to communicate in CMC. Learners find it harder to sustain communicating with native speakers if there is not enough guidance from the teachers (Shetzer & Warschauer, 2000). Li (2000) suggested that teachers involved in applying CMC to second language writing instruction should assume multiple roles in different phases of the project from planning and implementation to evaluation. In addition to designing effective learning tasks and constructing appropriate writing prompts, teachers should also be responsible for monitoring the learners' performance on the tasks and ensuring that the tasks are completed in ways such that their objectives and goals are met. Tseng (1999) advised the teachers to help pupils modify their sentences due to their limited writing ability and suggested that they should specify a communication topic for them to write with some directions in mind. Chiu (1998) indicated that instructors could play multiple roles from being a facilitator who could help the pupils in English while chatting freely, to a friend

with whom the pupils would be willing to share their feelings, to a consultant who might even have to solve pupils' personal problems. As for correcting pupils' errors, teachers must be more concerned with the global comprehension rather than grammatical correctness. With the objective of focusing on content, teachers do not need to point out pupils' grammatical errors directly but model grammatical structures pupils have trouble with or newly learned in their response, assuming learners may subconsciously notice and acquire the target features (Kroonenberg, 1994/1995).

- (4) Technical problems: apart from language proficiency problems, technical problems, such as the Internet breaking down, typing and difficulty accessing equipment, computer malfunction or computer illiteracy also blocked pupils from making the best of the exchange projects. With regard to the technical problems or malfunctions, teachers should establish a connection with information technology experts to support them when any problems exist. The teachers should also arrange the schedule of the computer labs so that pupils have the chance to work in these labs after class in order to enable them to complete their work if they have difficulties accessing the Internet at home. Liao (1999), and Stockwell and Levy (2001) argued that some emailing skills should be taught in advance. Pupils need to know how to send email, to format a letter, and developing typing skills, such as saving a space after punctuation marks before the project starts. Liao (1999) also suggested that technical problems such as the transmission of a computer virus via email need to be prevented. Pupils should install an anti-virus program on the computer and also learn to send direct mail messages, not as attachments, to avoid longer download times. Chiu (1998) illustrated that technical or malfunction problems troubled her pupils the most, and it was also the reason why they didn't get email responses from their teacher. Murray and Bollinger (2001) advised that instructors should play the roles of computer literacy instructors, activity devisers, and native English-speaker pen pal exchangers at the beginning stage.

Based on this review, the main difficulties EFL/ESL learners encounter while conducting cross-cultural email exchange projects are lack of response, limited language ability, technical problems, and time pressure due to inadequate project designs.

In order to avoid these difficulties, instructors were advised to contact each

other before the project starts, working together to arrange the tasks and activities, and to set logical and feasible goals for it. Collaboration throughout the process, making the objectives clear to learners, agreeing on a unified teaching method and on a certain exchange timetable, is crucial. The instructors who are involved in the projects played several important roles from project designers, to proof-readers, to technical instructors, to keypal mediators, to friends, and to consultants. These roles constituted the support of the projects and usually decided the success or failure of EFL/ESL cross-cultural email exchange projects. There were two different ways for instructors to choose how to incorporate email classroom connections: an add-on process, and an integrated process. Warschauer (1995b: 49) claimed that “experience has proven that international email exchanges can become lacklustre if they are not somewhat integrated into the curriculum of the course”. The add-on approach can lead to frustration and less-than-expected academic results in the complex connection situation. Only when the email classroom connection processes are truly integrated into the ongoing structure of classroom interaction can the results be educationally transforming (Warschauer, 1995: 95).

We have looked at the relevant theories in language, motivation, issues about culture teaching, process writing and the advantages of using email, drawing on various empirical research studies. The next chapter will elaborate how the study was conducted.

Chapter 3 Research Procedures and Methodologies

3.0 Introduction

This action research project was undertaken to explore if the application of an email exchange project would motivate EFL learners to learn, English and enhance their cultural understanding. Pupils' motivations, abilities and attitudes were studied. This chapter outlines the methodological design and procedures used in this study as well as the data analysis. It includes ten sections as follows: (a) research questions, (b) design of the research, (c) the scope of the study, (d) the description of the project, (e) data collection instrumentation, (f) data analysis, (g) trustworthiness, (h) discussion on ethics, (i) limitation of the study, and (j) summary.

3.1 Research Questions

In order to have a better understanding of pupils' learning process, the purpose of this research is to investigate the use of an email exchange project with EFL pupils in a secondary school and how pupils responded to the application of email in English and culture understanding. The main goal is to determine to what extent does the email exchange project increase pupils' motivation towards learning English and cultural learning, amongst Taiwan secondary school EFL pupils? The questions are as follows:

1. What are the participants' perceptions of and attitudes toward their English learning during the email exchange project?
2. What are the participants' perceptions of and attitudes regarding using the email exchange project to develop intercultural learning and to what extent did the pupils' learning in this area increase?
3. What are the participants' difficulties, solutions and their suggestions about the project?
4. What are the teachers' reflections of using email as a tool for language and culture teaching?

3.2 Design of the Research

3.2.1 Rationale of Qualitative Action Research

Researchers have long debated the relative value of qualitative and quantitative inquiry. Patton (1990) wisely advocated a “paradigm of choices” that seeks “methodological appropriateness as the primary criterion for judging methodological quality.” In educational situations, conducting pure experimental research is less likely to happen (Brown & Rodgers, 2002) because the participants are human beings and applying the scientific model is not easy. Controlling the conditions deliberately is the central feature of experimental methods. However, ‘Real world’ situations are dynamic and have many interrelated parts that influence each other, it is difficult to separate them for understanding through scientific methods. In an education context, some critical ethical questions and educational concerns can also be raised over applying the experimental method.

However, if the research context is treated like a laboratory and human beings treated with variables that can be manipulated, “controllable and inanimate” may be violating ethical considerations (Cohen, Manion & Morrison 2000: 211-212). It is especially true in a classroom situation, where manipulation might negatively affect learners’ learning and would be considered unethical. Furthermore, controlling pupils as ‘subjects’ in experimental and control groups raises another educational question related to issues of equality – it may be unfair to withhold an intervention from one group that is thought to be desirable. We should examine the context as a whole, retaining the “holistic and meaningful characteristics of real-life events” (Yin, 1984: 14).

Therefore, in recent years, qualitative research is has risen in stature in social science research and has become particularly suited to studying the impact of new technologies in the language classroom (Warschauer, 1999a; Belz, 2002). As Bax claimed “we need more careful qualitative study... I would argue for ethnographic analyses, in order to understand CALL (Computer Assistant Language Learning)” (Bax, 2003: 27). Levy also pointed out “Descriptive work is important in all CALL research, but especially for CMC-based work. Researchers need to be highly sensitive to the new phenomena that arise in mediated CALL learning environments” (Levy, 2000: 184).

In terms of identifying an appropriate research methodology, Larsen-Freeman and Long (1991: 14) pointed out that it is essential to be “clear about what the purposes of this study is to match that purpose with the attributes most likely to accomplish it”. The theoretical framework used in this study derived from action research and the teacher-researcher in this study adopted both qualitative and quantitative research instruments; the qualitative action research provided its main framework, supplemented by quantitative elements. The researcher believed that such an approach would be able to examine students' attitudes and motivation and permit identification of the various aspects of the context which influenced the success of email exchanging projects. As Watson-Gegeo (1988) suggested it is important “to understand the research context from the inside, for an emic perspective rather than from an outside, or etic, perspective”.

As this study seeks to understand whether using an email exchange can (i) improve pupils' motivation and (ii) develop pupils' intercultural understanding action-based research was considered appropriate for this research and provided a way to systematically investigate what works or does not work for the pupils in the class, what pupils find more or less useful, difficult, pleasurable, and so forth. The following section will start with an account of action research.

3.2.2 What is Action Research

3.2.2.1 Definition and Models of Action Research

The idea of action research originated from Kurt Lewin, a social scientist, during the 1940s in the USA. Action research, according to Lewin, “consisted in analysis fact-finding, conceptualization, planning execution, more fact-finding or evaluation; and then a repetition of this whole circle of activities; indeed a spiral of such circles” (Kemmis & McTaggart 1988: 13). Burns (1999: 30) claimed that “action research is contextual, small-scale and localised - it identifies and investigates problems within a specific situation.” Stringer (1996) claimed that community-based action originates in concerns about the problems of a group which make the group of people face problems in their everyday lives and work contexts, and assists them to figure out solutions to make a change in their lives. Therefore, action research is “an approach to research that is oriented to problem-solving in social and organizational settings” (Smith, 2001).

According to Arhar, J. M., Holly, M. L. et al (2001), action research serves as a bridge that the practitioner-researcher can use to connect research theory (the theoretical) and practical action (the empirical). In language education, the action researcher is often a teacher acting in the role of teacher-researcher. Action research (AR) in an education context is research often conducted by teachers, sometimes in collaboration with others, and which frequently leads to changes in the instructional context. Richards, Platt and Platt (1992: 29) have defined it as: *“Teacher-initiated classroom research that seeks to increase the teacher's understanding of classroom teaching and learning and to bring about improvements in classroom practices. Action research typically involves small-scale investigative projects.”*

In collaborative action research, teachers work together on shared problems. Burns (1999: 12) stated that the goal of collaborative action research is ‘to bring about change in social situations as a result of group problem solving and collaboration’. She argued that collaboration increases the likelihood that the results of research will lead to a change in institutional practices.

Despite the differences between these interpretations of AR from different authors, there is a common core and that includes identifying the problem, planning, implementing the action, observing and evaluating the results and revision (Kemmis & McTaggart, 1988). Kemmis and McTaggart (1988) and Nunan (1992: 17) stated that there are three characteristics of action research; namely: (1) action research is carried out by practitioners rather than outside practitioners; (2) action research is collaborative; and (3) action research is aimed at changing conditions. Benson (2001: 182) concluded five distinctive characteristics of AR as follows:

- (1) It addresses issues of practical concern to the researchers and the community of which they are members.
- (2) It involves systematic collection of data and reflection on practice.
- (3) It is usually small-scale and often involves observation of the effects of a change in practice.
- (4) It often involves analysis of qualitative data and description of events and processes.
- (5) Its outcomes include solutions to problems, professional development and the development of personal or local theories related to practice.

Based on Lewin’s approach, Kemmis and McTaggart described four phases of action research and explained that the four phases are planning, action, observation

and reflection (Kemmis & McTaggart 1988: 11). The representation of an AR model by Kemmis is given in Figure 3.1 and it displays the iterative nature of AR along with the major stages.

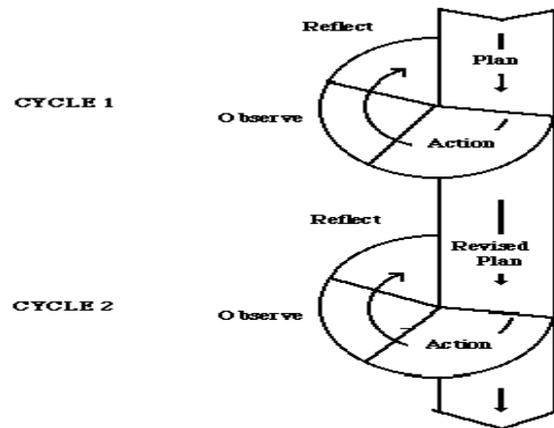


Figure 3.1: The ‘action research spiral’ – Adapted from Kemmis & McTaggart (1988: 14)

Elliot (1988: 163) produced a stage model based on Kemmis’ schema and summarised AR as a series of spirals constituted of data-driven action with critical reflection, which draws lessons from the results of the action. Each spiral contains:

- (1) Clarifying and diagnosing a practical situation that needs to be improved or a practical problem that needs to be resolved.
- (2) Formulating action-strategies to improve the situation or resolve the problem.
- (3) Implementing the action-strategies and evaluating their effectiveness.
- (4) Further clarification of the situation resulting in new definitions of problems or of areas for improvement (and so on to the next spiral of reflection and action).

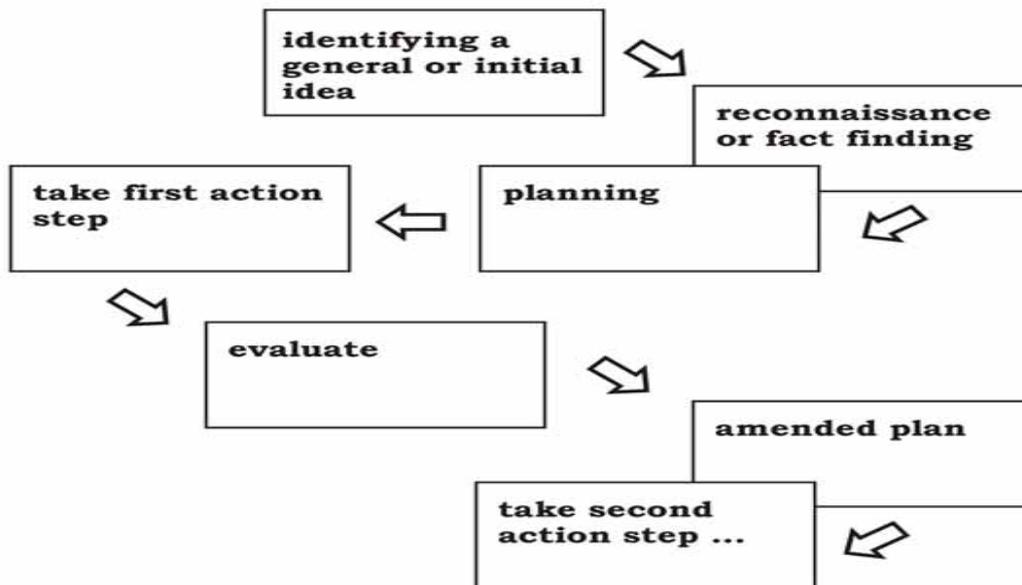


Figure 3.2: The Basic Cycle of Action Research (Elliot, 1988)

In this particular research, Elliot’s model was adopted. According to Figure 3.2, the first step is to identify an initial idea and find out the facts. The researcher identified the initial idea according to her English teaching experience in Taiwan and the pre-interview of the participating pupils to confirm their problems with learning English. Then she proposed action strategies, namely the application of an email exchange project to help the participants with their learning focusing in particular on their attitudes to learning language and intercultural learning. She then implemented the email exchange project, evaluated its effects, and located resulting problems. In the evaluation step, she included another teacher as a critical friend in the research process. She also participated actively throughout this whole process, trying to comprehend the participating pupils’ difficulties in learning and to accommodate their learning needs (McNiff, 1988). In this study, the researcher did not conduct another cycle given the time and word limitations but the reflection on future research will be provided in the concluding chapter 6.

3.2.2.2 Action Research in Relation to Education Research

Lewin (1948: 206) argued that social research should be based on the actions groups take to improve their conditions instead of focusing on controlled experiments, removed from real conditions. As people plan changes and engage in

real activities, fact-finding should determine whether success is being achieved and whether further planning and actions are necessary.

There is a comparison of traditional research and action research in the chart as follows.

What?	Traditional Research	Action Research
Who?	Conducted by university professors, scholars, and graduates on experimental and control groups	Conducted by teachers and principals on children in their care.
Where?	In environments where variables can be controlled	In schools and classrooms
How?	Using quantitative methods to show, to some predetermined degree of statistical significance, a cause-effect relationship between variables	Using qualitative methods to describe what is happening and to understand the effects of some educational intervention.
Why?	To report and publish conclusions that can be generalised to larger populations	To take action and effect positive educational change in the specific school environment that was studied.

Table 3.1: A comparison of traditional research and action research (Adapted from Mills, G. 2003).

In education contexts, action research with its spirit of problem-solving, bringing change and a teacher as a researcher, serves as an appropriate approach to link the purpose and answer the research question. What distinguishes action research from other forms of educational research in general is that it is generally conducted by the teachers as the classroom researchers within a specific classroom situation, and aims to develop the problem related to that particular situation. Johnson and Chen (1992: 212) claimed that:

“teachers are so close to pupils on a daily basis, their own inquiry from their unique perspectives can make an important contribution to knowledge about teaching and learning. In addition, teachers who conduct their own research build a richer

understanding of their work lives and gain the confidence, knowledge and support needed to make important change”.

It was argued that the teachers as researchers could provide more insight into what is happening in their classrooms, and eventually contribute to fill up the gap between researchers for researchers/theories and researchers for teachers/practice. As the participants are usually involved in some level of the decision-making in the study, it makes AR social and democratic (Carr & Kemmis, 1983). Furthermore, an important aspect of AR is that it involves change, not only in participants’ practice and situation of that practice, but also in their understanding of both. The goal of such change though, is not simply to understand that practice better, but to use what is learned to improve it. Improvement focuses on three aspects: improvement in one’s practice, improvement in the situation where practice occurs, and improvement in understanding of both one’s practice and one’s situation (Carr & Kemmis, 1983).

3.2.2.3 Limitations and Criticism of Action Research

Although AR has gradually obtained support from educators, many researchers still do not view it as a legitimate form of research and inquiry. They make the critique that action research is an informal, rather than a more rigorous, approach to educational research (Stringer, 1999: 19). Another one of the criticisms of action research is that teachers, as researchers, have the ability for data collection, but lack of the skills for data interpretation (Winter 1982: 162).

Furthermore, it is thought that the findings from teachers cannot contribute to the development of theories since they are not able to be generalised in other contexts (Webb 1996). This belief ignores the fact that teachers stand in the front line of real daily classroom practice and they are more appropriate to investigate their own problems in their classrooms. The suggestion that teachers might be incompetent to interpret data and to develop theories from their findings can be solved through building up reflective knowledge. Through critical engagement and reflective actions, this kind of reflective knowledge can put flesh on the bones of abstract conceptual knowledge gained through theoretical analysis (Park 2001: 87). The researcher is aware that it is not enough to depend on personal knowledge only from the teaching experience, but it is important to expand knowledge from reading around the subject and taking courses in relation to classroom practice. The objectivity of AR might be

questioned by classic researchers, however, the benefits of the process for pupils and teachers seem to outweigh the loss of experimental purity.

3.3 The Scope of the Study

3.3.1 Time and Setting

The research site was a rural public secondary school in Taiwan. Ru-Feng Secondary School is located in a small town in New Taipei City, the northern part of Taiwan; and is where the researcher, myself, has taught for more than ten years. The data collection aspect of the study took place from September 2008 through to June 2009. The pupils and the researcher met for one and half hours every other week in two classrooms, including a traditional classroom and a computer lab. The researcher was assisted by the Information Technology teacher and the class also had daily access to the computer lab during their one-hour lunch break. The computer lab was equipped with thirty computers available to support pupils' needs, giving Internet access for online surfing and finding new materials. Sometimes the lesson was conducted in a reading room, equipped with a projector and a computer, supporting presentations and overhead slide shows for process writing learning.

3.3.2 Target Population

The pupils at this secondary school were learning English as a foreign language. Most of them had fewer opportunities to learn English outside of school compared with pupils in the big cities. Furthermore, they had much less opportunity to study abroad because of the family income gap between urban and rural areas in Taiwan. In order to get access to the target participants, the researcher made contact with the other 6 English teachers in her school to recruit more pupils willing and interested in participating in the project. The total number of EFL participants recruited in this study was 26 eighth-graders. (In this study all of the names, including participants, the school, the place where the research took place, etc. have been changed with pseudonyms.) This number was equivalent to a class and thought to be an appropriately sized group for an action research project.

They came from six different classes and consisted of 18 females and 8 males with an average age of 13-14 years whose first language was Mandarin Chinese. All the participants had been studying English as a required subject since their third

grade year of formal instruction at school or the equivalent; however, their levels were mainly beginner levels. They knew the mechanics of English, but very few of them could write English well. Some of the pupils hesitated to participate in the research because of their lack of confidence in English email reading and writing. However, they decided to join in the project because they were motivated to try out new ways to improve their English learning, and to use English in a real situation to find out more about other parts of the world.

In the first class meeting, the researcher conducted a questionnaire survey (Appendix A) in order to find out the pupils' past learning experiences, their knowledge, feelings about English writing, and their use of the computer and Internet. The 26 participating pupils expressed the reasons for them to participate in this project. Twenty reported choosing to participate in the project because they were curious about it and wanted to try out this new way of learning English. The incorporation of computer and Internet technology attracted most of the participating pupils even though they were not confident in their own English abilities.

3.4 The Description of the Projects

3.4.1 The Epal Email Exchange Project

In order to access the potential international keypals, the researcher posted a notice on a website called ePal Global Community (wwwv.epals.com/), soliciting classes to exchange emails with the pupils in the study. Four high school teachers responded and consented to work with her. The researcher chose to work with Mrs. Marion, who taught secondary school pupils enrolled in an English class in a suburban public middle school in Philadelphia, USA because they had a similar number of pupils and strong interests in trying out an email exchange as a tool for classroom use. The teacher from the USA and the researcher had made contact one and half months during the summer time in 2008 before the project commenced in order to have a mutual understanding about the project.

After discussion, the first 5 lessons were constructed using the instructions and sample lessons given by the ePals website. They also reached the following agreement to start the email exchange project: (1) the project is considered a part of English classroom activity that will take place during the American keypals' school hours; (2) English is the main language in the email communication, but some

Chinese greeting are good because some of the American pupils will take Chinese as their foreign language learning in the next year; (3) all pupils will be allowed to respond to any topics they wish to know in the second paragraph of each email; (4) the pupils follow the five email examples in ‘the way we are’ project which was provided by the ePals website first before moving on to more topics about culture in the two countries; and (5) all of the pupils are required to submit copies of their emails to their teachers on the website before being delivered to their keypals.

The USA teacher, Marion (pseudonym) and the researcher described this email exchange project to their pupils’ parents via letters and also got the participants and Parental/Guardian consent forms (Appendix B and C) signed and returned from parents before the project launched. In order to assist pupils’ learning, the researcher also provided different worksheets that included information on English grammar, peer reviews, and rhetorical conventions, norms, and modes of English writing. The integration of writing samples, links to web pages related to the lesson topics, and interactive self-practice tests were offered. In the fourth week, the pupils expressed their difficulties of writing the email alone and the researcher started to bring in process writing in a collaborative way. The pupils were not very familiar with the collaborative ways of learning because they were used to competing with each other in an exam-oriented environment.

After introducing a new topic for writing, the focus was made on individual work until pupils gained more confidence in their abilities and then paired up or grouped them for sharing materials and ideas, incorporating technology into lessons to tackle on different learning styles. Specific learning goals were needed for some pupils, and scaffolding was key. There will always be a difference in learners’ ability and teachers need to change activities to find out a mixed balance to cater for certain strengths and weaknesses of learners. The constant competing with oneself to be better combined with external stimuli as extra motivation are found in the traditional classroom culture. This project tried to provide different layers of collaborative and individual learning opportunities to have real learning and also develop the learners’ ability to face the real world. The website design is presented in Figure 3.3

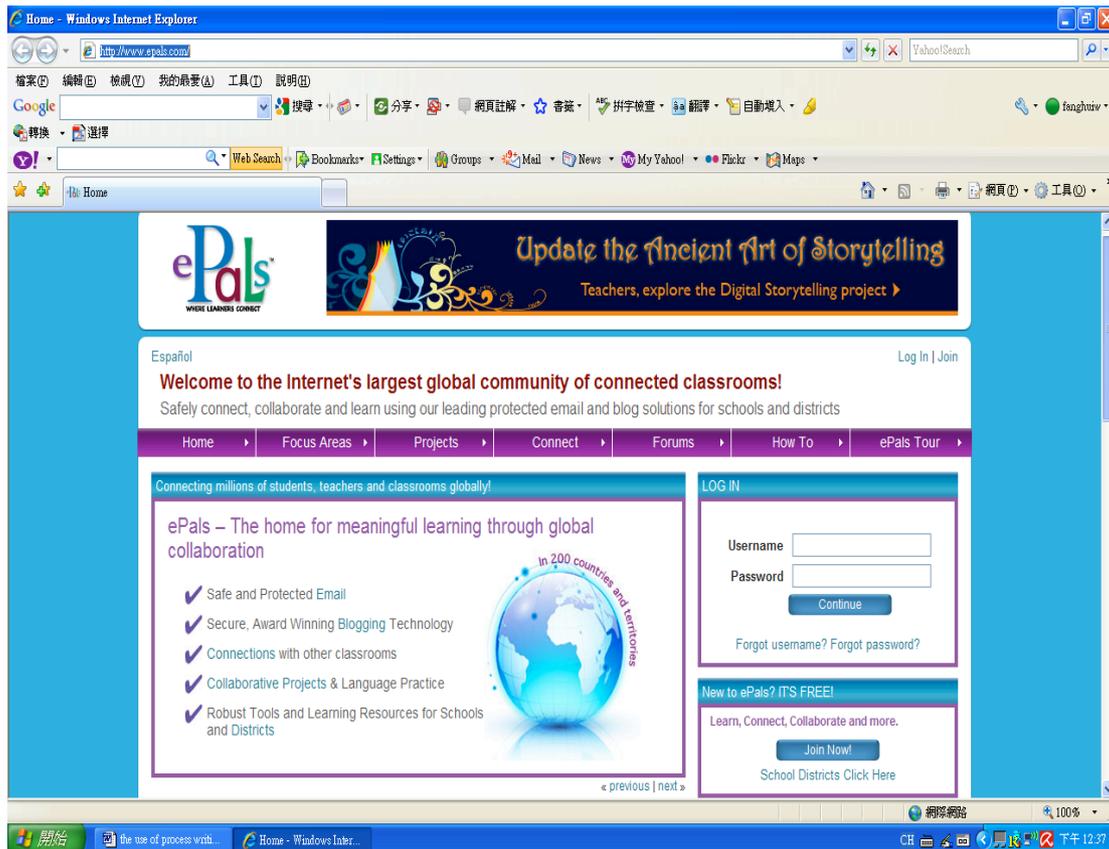


Figure 3.3 The email exchange website at www.epals.com

3.4.2 Email Topics

Pupils were given topics matched with the cultural themes in the textbook that they were studying in order to conduct the email discussion with the American keypals. There were guided questions with the process writing skills for them to exchange their thoughts on the topics. They were expected to respond to the topics in the first paragraph of the emails, and expand their own personalised questions to their keypals in the following paragraph of the emails in order to create better communication. The email topics are listed in Table 3.2.

Topics	Content
Topic 1	All about me: Introduce your family, yourself and your hobbies to your keypal.
Topic 2	A Typical Day in the School Life: Write to your keypal about your daily school life, your favourite school subjects and school activities.
Topic 3	Friends: Introduce your best friend to your keypal.
Topic 4	Environment: Describe your hometown in Taiwan to your keypal. Use as many characters as possible.

Topic 5	Food Culture: Tell your keypal about (1) popular snack in your family (2) your drink preferences and (3) the popular snack and drink in Taiwan
Topic 6	Describe to your keypal about the breakfast and lunch you usually eat in Taiwan
Topic 7	Introduce the traditional arts in your town/country to your keypal.
Topic 8	Write to your keypal about the date of your birthday, your birthday wishes, or what you like the most as your birthday present and why
Topic 9	Describe to your keypal the festival you celebrated recently in your town or the special festival in Taiwan
Topic10	Describe some of the taboos in our Taiwanese culture, what means good luck and what means bad luck.
Topic11	Taiwanese Traditional Festivals: Moon Festival (September), Chinese New Year (February), Lantern Festival (March), Tomb Sweeping Festival (April), Dragon Boat Festival (June)

Table 3.2 Email Topics

3.4.3 Model

The following is an outline of the action plan adapted from a model in Greenfield (2003), as utilised during 2009 school terms.

Procedure	Methods
Opening Communi- cation	(1) Teachers exchange brief introductions and background information. (2) Teachers send a “welcome” letter to foreign partner class.
Ice Breakers	(3) Pupils exchange first “hello” letter (informal email on general themes like personal characteristics, family, hobbies, school life, etc.) (4) Pupils exchange second email correspondence (focused on negative statements and conditionals). Pupils discuss their likes and dislikes, hopes and expectations during correspondence. (5) Pupils create cloze exercises (fill-in-the-blanks) with descriptive passages about their communities. Partners guess the missing words. (6) Pupils fill in blanks on partners’ cloze exercises, and then receive the answer key via email.
Negotiating the Project	(7) Pupils on both sides negotiate a topic for an imaginative essay and jointly-published magazine (several rounds of communication transpire after each respective class discussion). (8) Pupils share several text-based examples of imaginative essays. (9) Pupils write first draft of imaginative essays in class and receive peer

	critique in cooperative groups. Shared rubric used for evaluation. (10) Pupils revise drafts and send to foreign partners for peer-critique. Shared rubric is used for valuation.
Culture Exchange	(11) Pupils exchange culture box (posted to partners and filled with photos, stamps, postcards and other regalia).
Continued Correspondence	(12) Pupils send third email letters to partners (in our case, focusing on the use of connectives). (13) Pupils complete final draft of imaginative essays after receiving peer feedback from partners.
Anthology Production	(14) Final essays are edited and the magazines are jointly published. (15) Correspondence ensues, regarding anthology format, division of labour, inclusions and other related tasks. (16) Anthology completed, “goodbye/thank you letters” written, large and small group discussions, student surveys and interviews.

Table 3.3 An email exchange model - adapted from Greenfield (2003)

3.5 Data Collection Instrumentation

This study adopted qualitative and quantitative methods because these two methods act as a continuum in order to obtain various views of the phenomenon being investigated. More data was focused on the qualitative in order to dig out more if the project could enhance the pupils’ attitudes to English learning and also improve their intercultural communicative competence.

In order to ensure trustworthiness, multiple data collection instruments were employed in this study included the following: (1) the writing drafts and email documents; (2) the questionnaire after the project; (3) pupils’ weekly journals (4) the critical friend’s observation; (5) group and individual interviews and (6) a researcher’s journal. The findings were based on not only the reflection from the researcher herself, but also another colleague who was the English teacher of some of the participants’ to serve as a critical friend for providing different perspectives.

3.5.1 The Writing Drafts and Email Documents

The participants who were engaged in the exchange project were required to exchange their emails with distant keypals in the USA through the website called www.epals.com instead of personal email addresses. The two teachers had full access to the website to check and view all of the pupils’ interactions in digital format. Drafts

written before they were sent out and the email replies sent to their keypals were collected. Emails between the teacher (the researcher herself) and the participants about any questions they encountered while they wrote the email were collected as part of the data. Furthermore, the researcher contacted her American distant partner on a regular basis through emails. Their email exchange involved tracking the progress of the email, reporting on how the pupils reacted to the project tasks, and discussion about what other learning activities could be done to help the pupils. These emails were also used to study how teachers had negotiated the development of the exchange and how the pupils' attitudes to intercultural exchanges may have influenced the outcome of the projects. These documents were collected and reconstructed for analysis in order to find out the challenges and implementations that contributed to improving their attitudes to language learning through email exchange projects.

3.5.2 The Questionnaires Before and After the Project

Two questionnaires combining quantitative and qualitative measures were distributed to the participants and collected by the researcher (the teacher herself) in class after the project. Before the project began, a questionnaire (Appendix A) consisted of three sections. The first part was to gain baseline data about participants' demographic information on gender, age, date and place of birth, learning background, ability level in English, skills and facility on the computer and Internet. The second part contained 12 questions on a five-point Likert scale to examine the participants' attitudes and confidence towards English learning. The last part combined 4 open and semi-open questions to solicit pupils' expectations and opinions about the exchange project.

The questionnaire after the project (Appendix D) was divided into three parts. The first part was about the participants' perceptions about the effects of this project on motivating their English learning, cultural learning, email writing. The second part was about the participants' evaluation about their language learning and the reflection about the process writing and the computer using. The pupils were requested to express how much they agreed with the statements according to five point Likert scales. The last part with 8 open-ended questions was designed to elicit the enjoyment and the difficulties that the participants encountered while doing the project and provide their solutions to these difficulties with more details.

3.5.3 Observation

This study made use of two types of observation: participant observation and the observation by the critical friend. They are explained as follows.

3.5.3.1 Participant Observation

By playing two roles as a participant observer and a class teacher in this study, the researcher was hoping to have an integrated role to examine the successes and failures of email exchange projects first-hand. Being a class teacher allowed the researcher to build up a relationship of familiarity and trust with the participants and have a vantage point to pupils' perspectives inside and outside the class. That is what an outside researcher may not be able to achieve easily. As Burns (Burns, 1999: 80) pointed out that observation "enables researchers to gain personal insights on classroom interactions or sequences and search useful information in support of explanation to answer research questions". Patton (1990) also claimed that participant observation is the most comprehensive research strategy because the data obtained helps to gain more insights under study and which interviews alone are unable to provide.

Meanwhile, the researcher was aware of the dangers with the combined role of the teacher and the researcher such as the biased interpretations of the data, or missing important data. She applied some techniques advised by Lincoln and Guba (1985) in this study. The classroom observations were documented with tape recorders and a camera in order not to miss important data while the researcher was teaching. The tape was transcribed according to protocols, and the photos and field notes were collected for further reflective analysis and interpretation. The tape recording data was not the primary source of data, but it occasionally helped to clarify the data. The researcher also kept reflective journals after each lesson to keep track of ideas and developments. In order to avoid the biased data interpretations, the researcher invited a critical friend to observe her lessons, perform member checks with her pupils, and reported on sessions with the teachers' meeting group every other week in the school to gain alternative perspectives.

3.5.3.2 Critical Friend

Chapelle, Jamieson and Park (1996) warned about the limitations with participant observation. First, the data collected from participative observation can be subjective and anecdotal. Moreover, the teacher-researchers may find their attention divided between teaching and observing and miss out on crucial data. Patton (1980: 123) also suggests that careful training in learning how to write descriptively, taking disciplined field notes, knowing how to separate detail from trivia, and using rigorous methods to validate observations can help avoid being too subjective. In this study, the researcher invited another teacher, Sheena, who was willing to participate in the class to make the observation and do the videotaping. She obtained her master degree of TESOL in Taiwan. Her involvement and critical thinking provided more insight into things that the researcher might have ignored or neglected in class. Burns (1999: 82) defined non-participant observation as “watching and recording without personal involvement in the research contexts.” Its purpose is to have an observer with little or no contact with the subjects of the researcher serve as a good way to obtain extra feedback from the pupils as crucial points for the research analysis.

3.5.4 Interviews

The purpose of the interviews was to understand more about participants’ motivation and expectation toward project learning. Therefore, the researcher conducted two types of interviews, individual and focused semi-structured group interviews, to elicit their responses regarding their collaboration, language acquisition and cultural understanding.

3.5.4.1 Informal Individual Interview

Throughout the project, the researcher invited participants to come to her office during the 10-minute break time and carried out individual interviews based on the researcher’s observations in order to obtain the participants’ experience in-depth. It also served to establish good rapport with them, and confirm or reject the researcher’s interpretations of the observed classroom to gain more insights through their voices. Merriam (1988: 86) claimed that unstructured formats allowed for “ample opportunity to probe for clarification and ask questions appropriate to the respondent’s knowledge, involvement, and status”. Some pupils were specifically chosen because they emailed the researcher to express the problems they had while

writing or interacting with their partners. At the interview, the researcher had printed out the pupils' email correspondence with their partners and let them comment on their email interaction to provide the focus they needed. Through this, the researcher was able to clarify phenomena through the participants' interpretation rather than impose her analysis on the event.

3.5.4.2 Semi-Structured Group Interview

Towards the end of the project, the researcher conducted semi-structured focus group interviews to gather their perceptions and reflections about the email project learning at a meeting room in the school. There were 3 groups scheduled to participate. Each interview took 35 minutes and was tape-recorded with pupils and parental permission. In order to let them feel confident and less anxious to express their learning experience, the interview was conducted in Mandarin Chinese, the official language in Taiwan. Burns (1999: 120) defined the difference between the semi-structured interview and the structured interview describing it as "open-ended and thus provides much greater flexibility". And with the researcher's prepared guide questions, "it allows for the emergence of themes and topics which may not have been anticipated when the investigation began" (ibid). The questions (Appendix E) in this study were structured with open-ended and incorporated questions related to the participants' learning process and to compare the difference before and after the email project. The interviews were audio taped and transcribed as interview protocols.

3.5.5 Researcher's and Pupils' Journals

In this study, there are two different perspectives in keeping records of self-reflective logs: the pupils, and the researcher. In the following, the different written formats and field notes will be specified.

3.5.5.1 The Pupils' Weekly Journals

At the end of each week, the participants were asked to write their feedback about each lesson and keep a weekly journal apart from their email writing to show the perspectives upon their learning process. The researcher provided the pupils sample written formats for them to understand how to write. Keeping the pupils' journal encouraged participants to share their thoughts with the teacher (the researcher herself) and also to reflect on their learning and pursue insights into their own

learning experiences (Burns, 1999). The pupils were encouraged to express their feeling in English. However, Chinese was allowed for them to express their feeling fully in their mother tongue. Therefore, many of the pupils' journals presented a mixture of English and Chinese. In so doing, it helped the researcher to understand what pupils meant in depth without having the constraints of a limited target learning language. Pupils' responses also allowed the researcher to improve her teaching in certain ways. The difficulty of the translation for the whole weekly journal data needed to be addressed. Most of the participants would keep their weekly journal in Chinese, their native language, in order to express better about their feeling and thoughts. However, the teacher, as the researcher, observed that few pupils used Chinese in the journals, and gradually the percentage of English used in the journals increased. It is important for the readers to know whether the original data was in English or in Chinese. In the data analysis chapter, therefore, the researcher will highlight the original comment and the translation in Chinese in order to show the changes from the pupils.

3.5.5.2 Researcher's Reflective Journal

Spradley (1979) suggested making an introspective record of personal biases and feelings in order to understand their influence on the research. In this study, the researcher kept a journal to keep track of her teaching procedures and reflection after each lesson. The reflective journal contains the record of the researcher's opinions, new ideas, mistakes, fears, confusions, problems and breakthroughs that occurred during the action research. If she received any feedback from pupils in the interview, emails, pupils' reflective journal, as well as the discussion with the partner teacher in the USA, she would jot down the ideas under the same theme or category. The technique of keeping a reflective journal in action research was designed to assist the teacher as researcher to provide insightful information to issues and concerns arising through observations enables the researcher to reflect on their validity.

3.6 Data Analysis

An inductive analysis of the themes, patterns and categories (Patton, 2002) and descriptive statistics were used in this action research study to analyse and interpret the data qualitatively and quantitatively. This section will describe the procedures for analysing the quantitative data in the questionnaire survey.

Furthermore, analysis of qualitative data, including the participants' writing draft and emails, the observation field notes from the critical friend, and reflection journals from the pupils and the researcher will be provided. From both the qualitative and quantitative analysis, she hoped to achieve a better understanding of the effects of the application of email exchange projects to facilitate EFL pupils' English learning.

3.6.1 Analysis of the Quantitative Surveys

The statistical analysis was generated by the statistical program SPSS for Windows. The pupils' responses to the questionnaire after the project were displayed as frequency and percentage counts in order to find out how the majority answered the items on the questionnaires. The mean Likert scores for each statement on the two questionnaires were computed. Furthermore, the percentage of negative, neutral, and positive opinions on the questionnaire was calculated. Although questionnaire survey can be superficial and sometimes shallow on coverage, in this study the results were analysed and interpreted in tandem with results from other qualitative approaches in order to discover trends from multiple data collection methods. The researcher did not look at the pupils' English performance before and after the project because it was more difficult to prove that email exchange was the only reason for pupils' language improvement as many variables could influence the pupils' English performance.

3.6.2 Analysis of the Qualitative Data

In this study, a thematic analysis process was used. Data analysis was conducted on the interview transcripts, observation notes, reflective journals from pupils and the researcher, pupils' writing drafts and emails, and questionnaires. Themes that emerged were derived, coded and recoded at the initial stage. In terms of qualitative analysis, Patton (2002) advises researchers to code data, find patterns, label themes, and develop category systems by reading through all data repeatedly. The procedure that the researcher undertook in this study focused on the content of the data in order to identify themes, to code, to classify and identify main categories, as Patton (2002) suggested, and the process of analyses qualitative data was inductive and ongoing. First of all, the researcher read through all answers from the questionnaire after the project and interview transcriptions in order to be familiar with the data. She reread, reviewed and highlighted relevant sentences in order to make relevant excerpts and assign codes by 'post-it' notes based on the suggestion from

Braun and Clarke (2006: 89). The codes to be used in the coding process are a word or short phrases as suggested by Saldaña (2009). With manual coding, the researcher refined the relevant themes that would make up a ‘thematic network’ as suggested by Attride-Stirling (2001:385). It means the patterns of themes that resulted from gathering sub-themes together based on common ground. Coloured makers, highlighters and ‘post-it’ notes were used in this study. And then she combined the answers according to the four research questions after rereading the written answers and immersing herself in the study based on Burnard (1991).

In order to efficiently reduce the redundant data and categorise the documents, coding was a vital process for the research. The coding data was categorised into themes to answer the research questions and each part was referenced with numeral data taken from the supporting data. The transcription of the documental material was embedded in a narrative way. The researcher also extracted participants' reflection in the weekly journal and the questionnaire after the project, or quoted the interviewees' talk in order to exemplify concepts or contentions. The description displayed the participants' experiences of implementing the email project for English teaching and learning and the interpretation was amplified by explaining the findings, deducting the conclusions, making inferences about the direction of future study and offering the related literature. The data collection procedures will be provided in the following section.

3.7 Data Collection Procedure

In order to make it easier to grasp, the researcher created Table 3.4 below to show the relationship between each research question and the methods used for the data collection.

Research Questions	Instrument
1. What are the participants' perceptions of and attitudes towards their English learning during the email exchange project?	(1) Questionnaires (2) Interview (3) Pupils' weekly journals (4) Pupils' writing and emails

2. What are the participants' perceptions of and attitudes regarding using the email exchange project to develop intercultural learning and to what extent did the pupils' learning in this area increase?	(1) Questionnaires (2) Interview (3) Pupils' weekly journals (4) Observation field notes (5) Researcher's reflective journal
3. What are the participants' difficulties, solutions and their suggestions about the project?	(1) Pupils' weekly journals (2) Observation field notes (3) Researcher's reflective journal (4) Group/Individual interview
4. What are the teachers' reflections of using email as a tool for language and culture teaching?	(1) Researcher's reflection journal (2) Observation field notes

Table 3.4 Data collection tools for each research question

3.8 Trustworthiness

The basic question regarding trustworthiness in naturalistic inquiry is: "How can an inquirer persuade his or her audiences that the findings of an inquiry are worth paying attention to, worth taking account of?" (Lincoln & Guba, 1985: 301) Guba's criteria were implied for the validity of this study. Guba (1981) claimed that the trustworthiness of an action research is established by addressing the following characteristics of the study: credibility, transferability, dependability, and confirmability and also described a series of techniques that can be used achieves the outlined criteria.

Construct	Quantitative	Qualitative	Techniques for establishing this
Truth Value	Internal Validity	Credibility	Prolonged Engagement, persistent observation, triangulation, peer debriefing, negative case analysis, member-checking
Applicability	External Validity	Transferability	Thick description
Consistency	Reliability	Dependability	Inquiry audit
Neutrality	Objectivity	Confirmability	Confirmability audit, audit trail, triangulation, reflexivity

Figure 3.4: The criteria for trustworthiness - Adapted from Lincoln & Guba (1985)

To address the issues of credibility, the researcher carried out the techniques of prolonged engagement in the one-year study, persistent observation from time to time and member checking to check the interpretation of the data with the actual pupils. The researcher also used data triangulation that was constituted by different data collection methods (questionnaire survey, group and individual interviews, participant observations, observation field notes, pupils writing materials, etc.) and various sources of data (the pupils, the researcher and the critical friend as an observer) to make sense of the findings and interpretations. Data triangulation from multiple sources of evidence can reduce “the risk of chance associations and of systematic biases” (Maxwell, 1996).

To triangulate with theories, the researcher analysed the data based on the constructivist perspective and second language learning theory in order to make sense of the interpretations. It was essential to address that the study was context bounded and that the outcomes cannot be generalised to larger groups. However, the researcher provided thick descriptions so that the readers could make their judgment and comparisons of the findings with other possible contexts to which transfer might be contemplated. In order to establish dependability, the researcher considered the use of an external audit. She asked a critical colleague to join the class observation and to examine the processes of data collection. Meanwhile, the researcher received ongoing feedback on all aspects of her research project from the teachers’ meeting group every other week. Finally, confirmability of the data focused on the practice of triangulation as well. She also kept the researcher’s reflective journal on a regular lesson in order to formulate new questions of the teaching-learning processes in order to practice the reflexivity.

3.9 Ethical Issues

When conducting human research, ethical issues are especially significant. It is important for the teachers as researchers to take into consideration the ethical issues while conducting the qualitative research in order to respect the right of the participants and their dignity. Two of the ethical principles are identified as important in the main study: informed consent and confidentiality (Patton, 1990: 356-367). Informed consent is defined as participants’ understanding and their voluntary decision to participate in a research activity or to reveal themselves without being

harmed, manipulated or deceived (Berg, 1995). It is often ethically and legally required to gain informed consent when research involves human participants.

In this study, the researcher obtained ethical approval from the Ethics Advisory Committee in Durham University before she conducted the action research. For the use of her study, she prepared participant, and parental/guardian consent form (B and C) and all of these forms were produced both in English and Chinese. The issue of confidentiality or anonymity about the participants' personal information was reassured throughout the whole study and the final product of the thesis. The researcher gave each participant a pseudo name during the interview and data analysis and hoped their anonymity would be obtained.

3.10 Limitations

The current action research study presents the typical limitations. In this study, the target population (n=26) was restricted to one public secondary school in northern Taiwan. Consequently, the findings described in the results of the study cannot be generalised in other foreign language and learning situation or may not truly represent the entire population of secondary school pupils in Taiwan or other educational and cultural contexts. However, the results are credible when multiple data sources suggest similar results and trends.

Furthermore, Tomal (2003) asserted that teacher as researcher bias may affect the quality of the data interpretation in conducting action research. Based on the teaching experience, the researcher could potentially be biased to assume a positive impact on the groups of participants. This experience creates the potential for bias in assuming that other teachers will have the same reactions to action research. When conducting action research and interpreting data, the researcher has tried her best to remain neutral and objective. In order to attempt to avoid bias, all qualitative data was examined by a person familiar with qualitative data analysis but with no prior experience in action research to confirm any conclusions drawn with regard to the data. Although the study has some limitations, it contributes to reduce the gap in language teachers' taking action and developing appropriate language learning environments, affecting participants' motivation to learn English in an EFL classroom.

3.11 Summary of Justifications of Decisions Made

There are some justifications for decisions made in this action research that are elaborated as followed. Firstly, the decision for not focusing directly on improvement in pupils' learning was because it would have been difficult to establish improvement without an experiment involving a control group and this was not feasible within the action research project. Secondly, the decision to focus on motivation and pupils' intercultural learning was taken for the following reasons; lack of motivation to learn English in secondary schools is a key challenge in the Taiwanese context and integrating intercultural learning in language learning is strengthened using email and is also a source of motivation. Thirdly, it was decided also to address challenges and solutions in the research questions because this would be useful for other practitioners and researchers if they would conduct similar research in their contexts. Fourthly, the sample size of twenty-six pupils in this study was equivalent to one class and this is a fairly common focus in action research. The result was not intended to claim to be able to generalise on the basis of this project. However, the intention here was to contribute to the available research on this topic. Fifthly, the focus was on secondary school in this study as this is still an under-researched area in Taiwan and was also a convenient focus for the researcher as a teacher in a secondary school in order to get a deeper understanding of the real problem and taking action. Sixthly, a decision was taken to involve a critical friend as another adult observer in order to give a greater element of objectivity instead of merely from the teacher, as the researcher. Lastly, a variety of data sources were used in order to strengthen the trustworthiness of the study.

3.12 Chapter Summary

As mentioned earlier in section 3.2.1, having a control group and experiment group is not ethical and that's why action research has been adapted in this study without looking at pre and post test scores but focused on the pupils' perceptions and attitudes on their learning process. The researcher, the teacher herself, is aware of the limitations and problems of doing action research. However, the main goal was to uncover more of the perceptions of the pupils in depth. This methodology section provided information and explanation, which includes a clarification of action research as an appropriate methodology for this study, the setting, the profile of participants and data instruments details. Four phases of action research illustrated the

whole vision of pupils' learning and the researcher's self-reflection in the EFL context. The next chapter, Chapter 4, will describe the results along with details about the project that was undertaken and discussions, conclusions and suggestions will follow in Chapter 5 and 6.

Chapter 4 Data Analysis

4.0 Introduction

The purpose of this action research is to explore whether the email exchange project of EFL secondary school pupils with native English speakers served as a medium not only to enhance the pupils' motivation and attitude to learning English, but also improve their intercultural learning. The researcher also sought to find out more about the aspects that helped or hindered the success of the project largely from the pupils' perspectives. In this chapter, the results of the data analysis are presented and discussed regarding the four research questions posed in Chapter three. Both quantitative and qualitative procedures based on thematic analysis will be used to analyse the data. The descriptive statistics aimed to present quantitative information on the exchange project. In order to gain a better understanding of pupils' attitudes and any issues with the exchange, data was collected and analysed qualitatively from interviews, pupils' emails, pupils' weekly journals, comments from the critical friend, and the researcher's reflective journal. Data was collected over the whole project time between September 2008 and June 2009.

The four research questions in this study are restated as follows for convenience of reference.

1. What are the participants' perceptions of and attitudes toward their English learning during the email exchange project?
2. What are the participants' perceptions of and attitudes regarding using the email exchange project to develop intercultural learning and to what extent did the pupils' learning in this area increase?
3. What are the participants' difficulties, solutions and their suggestions about the project?
4. What are the teachers' reflections of using email as a tool for language and culture teaching?

Before analysing data related to the research questions above, the researcher will firstly provide demographic information about the participants based on the questionnaire before the project in order to establish their previous experiences in English learning background, and their use of computer and email for the project design.

4.1 Demographic Information of Participants

At the beginning of the project, the researcher conducted a questionnaire survey (Appendix A) among the 26 participants in order to ascertain information on their genders, age range, years of EFL learning, extra after-school English class, previous email experience, skills on computer using, home computer and internet facility, etc. The first part of the questionnaire with the demographic information of the pupils was useful to provide a better understanding of the learning background of the 26 participants because they were from 6 different classes and only met up once a week for the project. With a better notion of the pupils' prior learning experience, the researcher would be able to design the lessons and cooperate with them throughout the whole exchange project. Even though the qualitative data collected through the whole project was viewed as one corpus for the purpose of analysis, the researcher was fully aware of the learners' individual differences and will provide more details related to individual pupils about his/her learning later in the chapter to see if there was any correlation between the pupils' performance in the email exchange and some other individual variables. The data were computed and analysed by descriptive statistics such as frequency counts and percentages to present a summary of the characteristics of the data for the demographic data. The result is shown in Table 4.1 below.

Demographic data		N	Mean
Age		26	14.6
Years at RF junior high school		26	1.03
Participants' gender	Male	8	30.7%
	Female	18	69.3%
Years of EFL learning	4 years up	20	77%
	4 years	6	23%
Extra after-school English class	Yes	12	46.1%
	No	14	54.9%
Uses computer at home	Yes	26	100%
	No	0	
Internet offered at home	Yes	26	100%
	No	0	

Are computers difficult to use?	Yes	7	26.9%
	No	19	73.1%
Time spend on computer daily		26	1.06 hrs
Computer functions for use	Game	10	38.5 %
	Word processing	26	100%
	Power point	12	46.1 %
	The internet	26	100 %
Experience of using email	Yes	19	73.1%
	No	7	26.9%
Previous email experience with foreigners	Yes	1	3.8%
	No	25	96.2%

Table 4.1: Demographic information of participants (N=26)

As shown in Table 4.1, the total number of participants was 26, including 18 females and 8 males. They were all 8th graders between the age of 14 and 15. A total of 77% of pupils had been learning English for more than 4 years, which means they started learning English before the third grade in primary schools. Approximately half of the pupils (46.1%) attended the extra English classes after school. Even though they had been learning English for a long time and quite a number of participants had been attending extra lessons after school, the English level was varied. As for the Internet and computer facility, the data revealed that 100% of the pupils indicated that they owned computers and had Internet access at home. However, they were not allowed to access the Internet all the time due to their parents' control. 17 pupils had limited time to access computers or the Internet at home. In terms of the previous email experience of the participants, 19 (73.1%) pupils had email experience with friends in the same country and they all had email accounts in Chinese. There was only 1 pupil (3.8%) who had email experience with friends from other countries and the correspondence only lasted for 1 week. The rest of the pupils were very new to using email to learn and experience different cultures.

4.1.1 Process Writing

The researcher started with some email netiquette teaching first (Appendix F). After a few initial email messages were exchanged, it was clear that there was a need for the teacher (the researcher herself) to implement different assistance in the writing because a number of pupils expressed difficulties in writing emails to their American keypals. This was reflected in their first entries in their weekly journals despite the guidelines they received from the teacher. Further assistance and class discussion to know more about other classmates' writing experience was needed. In the 4th week, the teacher introduced process writing into the lesson to support the pupils to learn from each other before they embarked on their individual email writing. There were some guided questions to provide more guidance for the pupils (Appendix G). The aim was to provide a more interactive and collaborative learning environment and also stimulate a thinking process instead of the traditional way of focusing only on writing products. As discussed earlier in the literature review chapter, process writing refers to the six stages used to support the pupils' writing: brainstorming to generate the ideas, planning to organise ideas, drafting, revising, editing and finally publishing which was sending the emails to their keypals. Gardner and Johnson (1997: 4) defined the stages of the writing process as follows,

“Writing is a fluid process created by writers as they work. Accomplished writers move back and forth between the stages of the process, both consciously and unconsciously. Young writers, however, benefit from the structure and security of following the writing process in their writing.”

In the following section, the researcher will present and discuss the pupils' perceptions of their learning experience during the study, their views of the email exchange as a tool for their English and intercultural learning, the difficulties and solutions along the way and perceptions from the teacher (the researcher herself) and the critical friend about implementing the email exchange project.

4.2 Research Question 1: What are the Participants' Perceptions of and Attitudes toward Their English Learning during the Email Exchange Project?

The first research question aimed to explore the participants' perceptions of and the attitudes toward their learning of English as a result of the email exchange

project. Quantitative data from the questionnaire after the project were collated and percentages were calculated and the result was shown (Appendix H). However, the study intended to place more emphasis on how the pupils felt about their learning during the exchange process. Qualitative data including participants' views in the questionnaire, responses from pupils' individual and group interviews, pupils' and the researcher's reflections were used during the thematic analysis with the following outcomes.

4.2.1 Enhancing Motivation and Confidence

At the beginning of the project, although the majority of the pupils felt excited about having this opportunity to communicate with American keypals, the new experience was still daunting to some of them because they felt stressed and questioned if their English was good enough to be understood by their new friends with a different culture and language. Some pupils revealed their fears in their journals completed during the second week. (These were completed in Chinese and the researcher translated.)

Joseph	I am happy but also very nervous to have this chance to contact American pupils. I use email with my Taiwanese friends very often but I never use English to write to a foreign friend. It's a new thing for me. I am wondering if I can really make my American friend understand my English.
Sophie	When I heard the teacher mention the project, I hesitated to join in because I didn't know how well and how much I could use English to write.
Kevin	I was hesitant to join . My good friend wanted to join and that's why I was in. I don't know what I can do in this programme but I will just give it a try.

Some pupils gradually showed changes in their attitudes in their weekly journal as the project processed, especially Kevin. He was reluctant to participate in the project initially even though his English proficiency was the first in his class. He joined in mainly due to his best friend's encouragement without high motivation from himself because he felt the project would not help him in his academic achievement. After participating for several weeks, Kevin started to show a changed attitude

Kevin Week7	<i>I always thought that the most important thing to prepare for the exam was to concentrate on the textbooks. I didn't want to join the email project because I didn't think it would do any good to my English scores for the exam. However, my best friend was interested in it and he wanted me to join. To be honest, I was thinking it was a little bit of a waste of time at the beginning. I started to be more interested after the 4th week when my American friend asked me 6 questions about Taiwan that I didn't know how to answer at all. Ha, I like to be challenged and I started to find out more answers about his questions asked him back with more questions.</i>
Kevin Week12	<i>I replied to my American friend, Jack, with the discussion about the countries that we learn in the geography books and I am very surprised to know how much he knows about individual counties that have not been mentioned in my book. I want to know more about things in order to catch up with him. He made me think that what's in the textbook is not enough. I was frustrated but wanted to try to see the difference.</i>

His focus gradually switched from the performance reflected in his school score to the expectation of his keypal's feedback and challenge of his outside classroom knowledge. The transition was also shown in his email writing and participation in classroom discussion.

Sophie's American keypal is one of the keypals who continuously provided positive and encouraging comments regarding Sophie's writings along the way.

"Hi, Sophie, I was so excited to hear from you and I really hope we can still stay in touch this year! Sorry that I always have so much to tell you and so much to ask you! We actually have not learned anything about the Asian culture yet. However, I really enjoy what you told me about Taiwan, China, Korea and Japan. Please keep telling me more. I am going to learn Chinese next year and I wish my Chinese is going to be as good as your English and then you can teach me Chinese." (Sophie's American keypal's email, week 4.) This was a good source of encouragement and motivation for Sophie.

Tiffany's journals demonstrated another example about her appreciation of the American keypal's encouraging message and the motivation for learning.

Week 4	<i>I was 緊張(anxious) to write to my keypal in my first and second emails. However, my keypal ask (asked) me not to worry in her email. She say (said) she 看得懂(could understand) my English and 認為(thought) I am great. That really surprises me and encourages me to keep writing more.</i>
Week 12	<i>Every time when I received the email from my teacher and the keypal, I would highlight the words I didn't know and I also kept a word notebook to keep them. I have tried to use the words that my keypal used in her writing in my journal. It was hard to write the whole thing in English but when I looked back now, I am very proud of myself. However, I won't just stop here.</i>

Tiffany's writing showed an increased self-confidence and positive attitude, including the ability to be reflective about her learning.

Despite the hesitation voiced by pupils in their weekly journals initially, the data result from the questionnaire after the project (appendix H) in questions 1,2,3 and 4 showed that most pupils expressed positive feedback about participating in this project. 80% of the pupils show the increased motivation in question 5. They also expressed in the interviews that they gained more motivation to write email messages due to the feeling of being understood and the anticipation to receive the emails. The positive comments could be seen as follows.

Tina Week10	<i>After joining the project, the first thing for me to do when I went back home was to turn on the computer to check my email. Even though I know we were only requested to send out one email every other week, my keypal wrote me more and that really makes me want to reply to her as much as possible.</i>
David Week12	<i>I try to pay more attention to my daily life because everything can be shared with my American friend. The school life becomes more interesting because I try to think how I can write well to introduce a lot of things to my keypals. It's a pity that she only responded to me every other week. However, she wrote a lot to me and that made me want to keep up with her writing and sharpened my English skills.</i>

This showed that the encouragement and appreciation from the American keypals during the exchange process seemed to be more influential than the teacher

and provided direct, genuine motivation. The American keypals' responses with supportive messages encouraged and reinforced the Taiwanese pupils to make more efforts in replying to their email messages and create new motivation for further learning. The motivation from the "hands-on" life experience related writing, using technology to find out and extend their information to have things to talk about with the keypals. Motivation from writing to their American keypals as a real audience, from receiving direct feedback instead of in an artificial classroom environment was strong. Intrinsic motivation is the ultimate goal for educators to achieve. The motivation came from inside with the sense of satisfaction in working on a task instead from outside rewards like money or grades. And that aspect has been largely lacking in our Taiwan school education system that, according to many critics, places too much emphasis on external rewards.

Most of the pupils (75%) in questionnaire question 6 reported an increasing confidence with their email writing to their American partners as the project progressed. The results gathered from the interviews also echoed the view that email is a useful tool in terms of improving pupils' motivation specifically towards learning reading and writing in English. Some of the specific examples are shown below:

Tom	<i>This was a very enjoyable project. Emailing a person from another culture made English writing much more interesting and real. Even though I spent more time on it than writing the normal homework, I still enjoyed it</i>
Shelly	<i>I felt this project was a valuable experience because we can use what we learn in the class to communicate with new friends.</i>
Kevin	<i>I didn't want to join at the beginning, but I started to like it and want to do more after I feel the email writing is real and feel that I can write more and more.</i>

The comments reveal that the online email exchange was helpful in motivating their interests in learning. With help from the teacher, classmates and the keypals, they gradually gained the confidence to express their feelings in writing. In spite of the positive results, there were still 5 pupils who expressed in the interviews that they still felt a lot of pressure and did not feel satisfaction with their email writing when they participated in the project. This was due to their personal busy schedules

after school involving extra study that did not leave them enough time to digest the discussion in the class. Even though they expressed frustration at being short of time to finish the tasks, they still commented that they enjoyed the process writing, discussion in groups and the opportunity to communicate with their keypals.

Moreover, pupils seemed to connect with their partners on a personal level. For example, 81% of pupils said in the questionnaire in question 9 that it was nice to know pupils from another country, and more than half of them (79%) in question 10 indicated that they would love to continue emailing each other after the whole project had been completed. These viewpoints were further reinforced by similar comments in their interviews.

<i>Julia</i>	<i>I am glad I have made my first friend from America. I really enjoy my email exchange and small gifts exchange with her. It really broadened my horizon of the world and know more than what I can in the book in a fun way. We had made a deal to visit each other if we have earned money. Now we can Skype each other first.</i>
<i>Sophie</i>	<i>Thanks to this project, I have gained not only a special friend, but also valuable knowledge. It is my first time to talk to a foreigner. She is like a sister that I have never met. We can blame our brothers together about their silliness. That really surprised me that we are so far away from each other but feel so close to each other. That is a very special experience.</i>
<i>Edward</i>	<i>I enjoyed the project and am going to keep communicating with Clair in the future. She is more real than the characters in the textbook. I can really talk to her even she is a girl, ha, a beautiful one thought.</i>

In the open question section of the questionnaire after the project, the pupils were asked to express how they felt and what they enjoyed the most during the whole exchange process in open question 1. The comments revealed by the pupils are listed as follows with the percentage in Table 4.2. And the data showed that the email exchange project was helpful to motivate the pupils to learn and also specifically increased their interest in learning language.

Helpful (82%)	Interesting (79%)
Fun (74%)	Making a new friend (72%)
Having an opportunity to know people from another country (85%)	Learning a culture from a real person other than just learning from books or movies (84%)
Sharing someone else's life and experience (84%)	Worthwhile (83%)
Enjoying the project (78%)	Being glad to participate in the project (84%)

Table 4.2: A list about what pupils like about the email project

4.2.2 Increase Sense of Audience

At the beginning of the project, the pupils sent their individual emails to the teacher for correction of mistakes regarding grammar, spelling and content before they were sent out to their American keypals. This increased the workload of the teacher because the pupils often seemed not to pay attention to what the teacher has suggested and just sent out the emails to their keypals after correction. Similar mistakes were found repeatedly in the emails at later stages. They often gave short descriptions without expressing further ideas as the teacher suggested.

From the data shown in the question 7 in the questionnaire, the majority of the pupils (73%) indicated that they have become more aware of the importance of audience awareness after participating in the project. They also expressed their thoughts in the interviews about how they felt about having their classmates read their works for discussions and also writing to the keypals.

<i>Tom</i>	<i>When I knew my classmates would see my writing, I felt nervous. However, it also made me more careful about what I wrote. I also like to receive the instant comments from my classmates because I can make some changes based on their suggestions or ideas before I send the email out to my American keypal.</i>
<i>Tiffney</i>	<i>I was more careful to think about my American keypal how she would think and what she wanted to know when she read my writing. It's good to have</i>

	<i>the feedback from my friends in class first.</i>
Kevin	<i>Ha, it is more real to have a real person to write to instead of just giving it to the teacher to check.</i>

The pupils showed they were aware of the audience, not just their classmates, but also the real readers, American keypals and started to pay more attention to their own writings. The researcher's reflective journal coincided with the interview result.

“After applying process writing in the class, I found that some pupils showed different attitudes towards their writing. The discussion in groups first did assist the pupils to get involved and listen to each other more instead of just listening to me. However, some pupils were struggling with writing and couldn't really get the points from me.”
(The researcher's reflective journal, week 6)

The opportunity for the pupils to share their ideas, to assist one another to correct mistakes, to work with others provided them with the experience to get various audiences to read their works. They could receive feedback and provide comments as the audience for others. After sending out their emails to American keypals, they had their experience of meeting a real audience to read their writings. Sophie replied in the individual interview as follows.

*“I became **more careful** in my writing because my American keypal might not understand me. I always **double check** if I have made the mistake. And I like the teacher's reminder. Try **to think from their point of view**. I thought tea drinking is a simple normal thing to do until my keypal ask me how to do it. I didn't know how to answer her and that got me to start **to rethink what I took for granted**. (Sophie, individual interview, week10)*

After the project, the majority of the class (67%) expressed in the questionnaire in question 13 that the group discussion with the process writing made them more aware about what kinds of mistakes they shouldn't make. All of the responses showed that through the process of collaborative sharing and email writing, pupils started to become more aware of a sense of audience and make the efforts to check their own writing without relying on the teacher's correction.

Moreover, the responses from most of the pupils (82 %) in the questionnaire question 14 also showed that emailing to their American keypals encouraged them to

pay much more attention to their writing, like spelling, punctuation, grammar, and content compared to their writing in normal English class. They thus were developing a more positive attitude. John and Sophie expressed in the interviews as follows.

John	<i>Before the project, I didn't care much about writing. Writing for the test or exam is easy for me because I just needed to memorise the whole content in the textbook. At the beginning of the project, I was frustrated because I don't know what to write on my own. I need to have the questions for me and then I just answer them. I like the discussion about our writings in the class with the guidance from the teacher and I started to write to my keypal.</i>
Sophie	<i>Before the project, I'm only writing for myself or for the teacher. If I make the mistakes, it doesn't matter. But now I'm writing to my American friend. I want my writing to be great without too many mistakes because somebody else is going to read it.</i>

Writing to their American keypals, the authentic audience, made them pay much more attention not only to grammar, punctuation, spelling, but also to the clarity of the content. John made a good example in his learning journal as follows.

"I normally don't care too much about what I write in the English lesson because the only difference is to get a better or worse score for the tests. However, I felt losing face if my classmates found out my mistakes during the group discussion. So I started to be more careful with my writing. With my American keypal, I want my writing to be perfect before I sent it out to her. Ha, I like her to think I am good." (John, weekly journal, week 8)

Furthermore, the pupils (87%) expressed in the questionnaire question 17 that one of the most important benefits to learn through the email exchange project online was the opportunity for them to have real use and practice at English language with the native speakers instead of just doing textbook exercises. They claimed that being able to be exposed to natural language was very beneficial for them as language learners.

As Julia elaborated in her individual interview:

“Learning English in Taiwan there is a lack of opportunity to practice with native speakers, especially in our small town. We can only see a small numbers of foreigners coming here as tourists. However, we don’t have the chance to talk to them in our daily life. Through the Internet, it brings them to our lives. Sending my email to an American keypal and getting their reply made everything more real. I feel they are living English, not just English from the books.” (Julia, individual interview, week 20)

Julia emphasises her excitement at the opportunity to be exposed to English that the native speakers use. This authentic experience is especially crucial for pupils learning English as a foreign language, as their opportunities to be exposed to natural language might be limited, especially for the pupils in this kind of local Taiwanese schools.

In spite of the positive feedback, there were still three pupils who expressed in the interviews that they still viewed the teacher as the main real audience to give them feedback and did not really enjoy the discussion in the process writing lessons. They also expressed in their weekly journals that they liked to email the teacher and see what the teacher thought about their writing instead of receiving feedback from their classmates.

Lulu Week11	<i>I like to send my work to the teacher because it’s like that I can have the one-to-one discussion with teacher which we don’t normally have time to do that very often in class with so many people. I also like to reply to my teacher and see her comments on my writing. However, I don’t like my classmates see my writing because they can’t correct my writing as well as the teacher.</i>
Jim Week14	<i>Sending my work to the teacher is fun because the teacher will give me more advice. I can think about what to write. The group discussion is sometimes a waste of time because the classmates don’t know what to talk about. Teacher, can we just read more what American keypals’ writing without too much of group discussion?</i>

This quotation highlights one of the reasons why the researcher wanted to introduce the email exchange project supported with process writing. The aim was to

change the way the pupils viewed the teacher as the only audience and resource for their learning. This will be discussed more in the following section.

4.2.3 Reinforce Collaborative Learning

The pupils indicated that collaboration in the process writing in the classroom assisted them step by step to learn from the discussion with their classmates and that built up more confidence in order to help them to write or reply to the keypals' emails. Joseph was a good example who showed his appreciation and changed attitude in his weekly journal as follows.

Week6	<i>I was worried about the English email writing because we have never tried that in the classroom before. Normally we just needed to answer the questions for the exam. I was nervous when the teacher guided us to have the brain storming to get the ideas because I didn't know what to say at the beginning and I just kept silent. However, I liked to listen to other classmates. It's good to discuss ideas with my classmates without driving myself crazy. Sometimes when my classmates couldn't think of anything, the teacher would provide some examples to guide us. This made me feel more confident to write.</i>
Week8	<i>I was so happy that I finally could say something in the brainstorming session while the teacher asked us the question. Ha, it's easier than I expected.</i>

The opportunity for the participants to learn from their peers in class and also from their American keypals through the email exchange project was beneficial and improved their confidence and attitude. The researcher tried to encourage all of the pupils with various levels of language proficiency to get involved in the group discussion for generating more ideas. The comment from the critical friend demonstrated the different classroom culture.

“The teacher tried to encourage all of the pupils with various language proficiency to get involved in group discussion in order to generate more ideas from one another instead of individual learning. Even though not all of the pupils could participate in the discussion immediately and there were some shy pupils hesitating to take part. I

could see the dynamic of the class different from the normal class.” (The comment from the critical friend, week 7)

The critical friend also pointed out the difficulty for the shy pupils to work together to speak up. It was not a smooth journey to involve the pupils in collaborative learning. In the researcher’s journal, she commented that it took time for the pupils to become familiar with working in groups and to explore the unfamiliar area.

“Today’s lesson went better after a shaky start. It was the first time for the pupils to work together in groups. Some pupils were shy to share their opinions and some were very keen in delivering what they thought. I should remind myself to provide pupils equal time to participate in the discussion and then build up their own confidence to work in groups. Monitoring pupils is what I should do better in the following lessons in order to keep pupils on task in an effective way.” (The researcher’s reflective journal, week 4th)

Some pupils with weaker writing skills expressed their fear of having difficulty during the discussion and brainstorming steps in the process writing section. The worry of being tagged as “stupid” or being criticised about their writings by stronger peers showed up in the interviews.

Lulu	<i>I don’t know what to say in the discussion, sorry, teacher.</i>
Jenice	<i>I need more help to work within the group.</i>
Tiffany	<i>I am not smart enough to give them my ideas. I need more time.</i>

Edward was reluctant to join the discussion in the group previously and expressed his frustration in his weekly journal as follows.

Week6	<i>I don’t like the conversation in the process writing. I wish that teacher could just give me the comments of my own writing to myself. I don’t want others to see my mistakes because they might think I am not good.</i>
Week 11	<i>I was afraid to express what I think in my group because I don’t know it is good enough and sometimes I don’t know what to say. However, today’s lesson made me feel that I can be good sometimes and getting the help from my friends is nice because it let me feel that we all have the same questions and I am not alone.</i>

It really took him quite a long time to open up. During the project, the researcher found out that he did not like to join the conversation and just sat back in the group to wait for others to do the talking. After a few weeks of practice, he gradually changed his way of thinking and slowly embraced the discussion and cooperation with his classmates without thinking too much how others viewed him.

It showed that the ‘face issue’ still plays a crucial part in Taiwanese pupils’ learning. However, they gradually realised that learning from others by involving themselves in the discussion of the process writing under the teacher’s guidance was beneficial for them instead of the competition with others about test scores or worrying about looking bad in front of their peers. For example, Tina changed her comments in weekly journals as follows.

Week 7	<i>I like the teacher to read my writing and provide us the friendly comments individually. I was shy and didn't want to talk in the group discussion. However, I like to reply to the teacher more through email because I don't have to worry if I can't answer it. I have more time to think.</i>
Week 13	<i>It was my first time to express what I have discussed with the teacher through email in the group discussion. I think the discussion from the teacher in advance really helped me to talk. I normally can't really talk about anything so easily immediately.</i>

As the project processed, Tina gradually started to open herself more in the discussion. It seems that the email exchange environment could be a less stressful learning process comparing to the immediate response in the group discussion for some shy pupils. With the assistance and support in the more individual learning environment, the shy pupils started to have the platform to shine and make their voice heard.

From the weekly journals, some pupils with weaker language proficiency expressed their feelings about receiving assistance from others as follow.

Jolin Week 12	<i>Today I was really frustrated because I really didn't know what to write to my keypal even though the teacher gave us the hand-outs with some instructions and ideas in advance. After the discussion with my classmates in the group and listening to what they wanted to discuss with their keypals, that gave me the inspiration for my own writing.</i>
Stephanie Week 9	<i>In the beginning of the email exchange, my keypal did not write too much and I didn't know what to ask. Last Thursday Julia told me how she asked her keypal and I learned a lot and used her ways to ask my keypal. Today I got my keypal's reply and she wrote more to me. Ha, it worked.</i>
Sophie week 11	<i>Sometimes writing email messages is so frustrating just because I don't have enough English words for me to use, so I just keep it short. However, during the group discussion, I heard more sharing from others and I thought Mike can do that, then I can do better.</i>

It was “frustrating” for Sophie to write English messages when she was required to write more with longer sentences. The peer pressure and competition forced her to challenge herself to push her own potential. However, the teacher wanted to change from the competitive approach to be more collaborative because the pupils could not just learn from the teacher as the main resource information provider, but also from the peers. The pupils with stronger writing skills also benefited from the process writing in the collaborative learning environment through demonstrating what they have known and explored what they didn't know. Julia showed her thoughts in her weekly journals.

Week 10	<i>I really enjoy working with my classmates and also sharing with them what I wrote with my classmates. Ha, I just can't stop talking because they were so keen on listening to me and asking me questions. Some questions have never come to my mind and I could ask the teacher for more help and also share with my classmates. It's a win-win situation.</i>
Week 12	<i>The American students wrote much longer even though I knew my classmates much better because only a few words that I don't understand. Their writings made me feel I have much more to learn. And I used the Internet more in order to search for information. That is the opportunity that we didn't have much in normal class.</i>

Week 14	<i>Today I found out one word that I couldn't make my classmates understand me. I came back and look up in the dictionary and I would go back to explain in a better way next week to my friends.</i>
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The pupils had been used to the teacher-centred way of teaching and it would take time for them to get use to collaborative learning and discussion. This email exchange with process writing in the collaborative atmosphere seemed to help make a shift in the teaching and learning culture among the pupils. Collaboration provides support for the lower achievers but also stimulate the higher achievers to take more responsibility for their own learning. Allowing these pupils to demonstrate their talents through helping their peers really increased everyone's confidence. Furthermore, through being viewed as experts and helpers, both by their in-class and distant peers, these writers were more motivated to pay more attention to see if their writing was clear without having too many errors in order to assist their peers. The collaborative atmosphere assisted the pupils to learn from each other, and does not solely depend on the teacher for the comments and answers.

The critical friend's observation comment provided another perspective that pupils were more aware of surface-level grammatical and spelling errors after the collaborative learning in the process writing section due to the group learning effect.

"In these 5 weeks, the teacher has provided the way to include everyone in the task to practice the target language and share their ideas about writing in small groups. Even though it only lasted for 10 minutes instead of the whole 45-minutes in one period, the way seems to help to build up the pupil to pupil and pupil to teacher relationships in the classroom and pupils often spot on each other's minor mistakes without pointing out by the teacher in advance." (The critical friend's comment, week 10)

During this email exchange project, pupils were reading and writing for real purposes, therefore their motivation to read and understand was getting higher. The responses from the interviews indicated that participants appreciated having the opportunity to talk about what they were going to write before they wrote their keypals' emails. John provided a good example in the interview.

"I enjoy discussing what I want to write with my friends before I really write it. I want to know what other people are going to say because it can give me some ideas that I

cannot come out myself. And I am very happy when my classmates said I had a great writing with my keypal. That encourages me to sharpen my writing and read more.”

The note from the critical friend’s observation supported the statements.

“The small group discussions in today’s lesson really did provide quite a lot of help to the pupils. Even though some of the pupils were not talking very much in the groups, however, they were really engaged and jotting down the ideas from their classmates. Learning from others enables them to come out more ideas for writing than writing alone without the benefit of prior discussion. Four quiet pupils only made few comments, but they were exposed to discussion and might be able to draw upon the experiences of their peers to enhance their own writing.” (The critical friend’s comment, week 8)

4.2.4 Improvement in Attitudes to Writing

As it was mentioned earlier, the study did not intend to compare the improvement in writing through the test result or the objective measures but to find out more about how the pupils thought through the whole writing process. So part of examining their attitude to writing was looking at how they thought they had improved. The majority of the pupils (88%) responded in the questionnaire after the project in question 20 that their overall writing ability has gradually improved since they commenced the project. The comments from the interview about the participants’ perceptions of their overall improvement of English writing abilities after the exchange were positive. Some of the comments from the interviews were listed as follows.

Julia	<i>I learned a lot of useful sentences from my keypal.</i>
Joe	<i>This email project provides me with more chances to practice my English writing, especially in using new words. Because I was afraid of causing misunderstanding, I worked hard on looking up the usages of the new words in the dictionaries. It’s my first time to spend so much time on the dictionaries.</i>
Stephanie	<i>I could write English letters more smoothly after the projects. At beginning, I could just write a few sentences in a long time. And now, I could write more and it took less time. Ha. I feel good about myself.</i>

Alice	<p><i>“I like that the teacher gave us the follow-up instruction based on the things I learned from my keypal or other classmates’ writing with their keypals. I can learn more in that way because I cannot only see my own writing, my keypals reply, but also other classmates’ and their keypals’. Sometimes I wish my keypal can write as much as others’ keypals.</i></p>
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Julia also expressed in her learning journal as follows.

“Before the email programme, I could not imagine that I could compose a complete writing piece because I didn’t think my English writing was good enough. After joining the program, I wanted to learn more about my keypal and I forced myself to write more and more. I use dictionaries a lot to understand her writing and also help me to write. During the discussion with the class, it really helped me to get more ideas for writing.” (Julia, reflective journal, week 12)

One of Julia’s long emails and her keypal’s email are shown in Appendix I. That was one of the examples to show this positive experience encouraged pupils to write more and gradually she tried to overcome her problems with incomplete writing. And Julia’s efforts could also be seen in her longer emails. It showed when pupils found that their American counterparts could understand their writing and wanted to communicate more, they felt pleased and wanted to write more.

From the researcher’s reflective journal, it showed that the majority of the pupils relied on her as a teacher to check their messages initially for spelling, punctuation and grammatical errors before messages were sent out. She supported the technicality of their writing more than in the generation of content for their messages and in directing their queries. As shown in her reflective journal:

“It’s the fourth week of email exchange. It’s good to check all of the pupils’ writing before they send them to the Americans because I want to make sure they don’t have too many mistakes. However, it seems that half of the pupils keep making the same mistakes even though I have corrected them in the previous emails. I think I should come out with something different for them to not just have to rely on me”. (The researcher’s journal, week 4)

In the 4th week, she combined the process writing and collaborative learning into the lessons as described in the previous section, the pupils started to learn how to help each other to do the checking and sharing the ideas during the process writing lessons. And the writing content and topics gradually developed from a factual

communication toward more detailed information seeking. According to the questionnaire in question 27, 75% of the pupils agreed that they learned more vocabulary words, sentence structures and their grammatical knowledge improved as well. Some Taiwanese pupils asked their American keypals to correct their grammatical mistakes in their emails. For instance, Jenny asked her keypal to point out her errors in her email.

“I will be glad if you can tell me if I have made any mistakes in my email because I really want to improve myself and learn more from you. Please don’t hesitate to do it if you see any. Practice makes perfect, right?” (Jenny’s email to her keypal, week 7)

Their American epals pointed out some of the typo or grammar mistakes in their emails without criticising the Taiwanese pupils’ writings but encouraging them to write more without worrying about the mistakes. All pupils indicated in the questionnaire and the interviews that it was interesting and exciting to communicate with Americans via email. Initially, the Taiwanese tended to start with short descriptive sentences when they could not comprehend their keypals’ meanings instead of asking questions to search for more information. That was due to lack of training in their normal English learning to look for information but just taking whatever they received. During the process writing and discussion sessions, the researcher guided the pupils to find out questions to ask and gradually they learned how to ask questions in order to obtain the information. From week 4-8, they asked very simple questions. They learned how to propose questions to their keypals and attempted to convey how they felt to their keypals and usually received the insights they’d hoped to acquire. For instance, Janet asked, *“could you explanation it for me? I am very interested in what you said. However, I don’t really understand that part. Can you give me more examples about that?”* when her American keypal said that she could tell her if there were any major differences in them after she read her profile. And her American e-counterpart did explain it again to her.

Especially, Janet used the word ‘explanation’ which was a big word for the secondary schools. The researcher was used to conduct the question-asking training process by asking the pupils if they have any explanations for some sentence. Janet adopted the word even though she used the wrong grammar form, and it showed that she started to use what she had learned as her own to perform in her writing. This shows a positive attitude of being proactive and committed.

The researcher reflected in her reflective journal about the time-consuming and endless correction of the pupils' email before sending out. And she also found out that some other pupils could learn from the correspondence with the American pupils. *"Today, Julia, Sophie, Kevin and Stephanie started to imitate American keypals' use of language and paid much more attention to their grammar and vocabulary. It is good to see how they used the vocabulary shown in their keypals' writing and practices in their email reply and also in the classroom discussion."* (The researcher's reflective journal, week 8)

It showed this type of authentic input from native speakers enhanced the language learners to produce more authentic language instead of answering the textbook questions robotically.

Through the use of email exchange project, the pupils said that their writing became more meaningful and authentic. They indicated that they had genuine partners to listen to their voices and they could obtain responses as well. Moreover, by means of giving or acquiring the cultural information, the pupils could learn effective strategies to apply to reading and writing skills. Therefore, email exchange programs seem to be positively useful and appropriate ways to improve EFL learners' attitude to the improvement of reading and writing skills.

Providing practical English writing, and motivating active learning of use of new vocabulary, grammar and idiomatic phrases, useful colloquial sentences from their keypals were the reasons why they felt English abilities generally improved.

4.3 Research Question 2: What are the Participants' Perceptions of and Attitudes Regarding Using the Email Exchange Project to Develop Intercultural Learning and to What Extent did the Pupils' Learning in this Area Increase?

This section strove to investigate how this email exchange project could be a tool to develop language learners' intercultural learning and to what extent the learning increased. The data analysis was influenced by the objectives adapted from Byram's model of intercultural competence (1997) (i.e. knowledge, attitudes, skills and awareness and skills) and the guidelines for assessment of intercultural experience. Based on Byram's theory, attitudes and knowledge are preconditions while the skills of interpreting and relating as well as the skills of interaction and discovery would influence the processes of intercultural communication. Pupils can acquire these factors through experience and reflection, but their acquisition in an

educational setting with the help of a teacher can additionally promote the development of critical cultural awareness, the fifth component of intercultural competence (Byram, 2000: 33). Byram’s (1997) model was adapted here because it is a systematic approach and widely accepted in this field to offer a comprehensive framework that encompassed diverse skills and objectives of intercultural competence. Pupils’ emails, weekly journals, questionnaire, interviews were provided according to the objectives in order to answer this research question.

4.3.1 Knowledge of Social Groups and their Products and Practices

Byram’s (1997) model refers to the intercultural learner’s knowledge about the specific social groups, their products and practices, as well as the process of interaction in the learner’s own and the target culture.

For the 26 participants, this project was their first intensive contact with people from another cultural background. They exchanged their cultural perspective through emails topics such as (a) all about me, (b) school life and after school activities, (c) places of interest, (d) geographical information, (e) food and celebration, (f) animals and plants (g) personal favourites, (h) holiday celebrations, (i) taboos and (j) current events. Four cultural parcels via airmails with school items like books, posters, gifts and toys and holiday gifts like Easter, Christmas, Moon Festival, and Chinese New Year were included.

From the questionnaire after the project in question 21, the pupils (93%) expressed their excitement at learning about American culture through the email and cultural parcels exchange. More positive comments were shown in weekly journals.

Tiffany Week18	<i>It’s so nice to try out Easter chocolate eggs that the American friends sent. We have that in the shop but the shape of theirs are very cute and meaningful.</i>
Alice Week8	<i>I have never seen the school magnet and the badge. Their school is so interesting to have the bare footprint. I want to ask my keypal to know more about that. Why don’t we have that in our school?</i>

The cultural items like chocolate eggs and school objects from America brought more discussion in the class.

The responses from the group interview also revealed that email correspondence with American pupils to exchange information about each other's school, city and country could contribute to their factual knowledge of the target culture.

Ruth	<i>I like the way to know more about America and the pupils over there. In this case, I know more about their country symbol, national flower, how they celebrate the Christmas. It's more real than watching television or reading the textbook.</i>
Kevin	<i>I learn so much from my keypal. He told me the school system, their state symbol, bird and plant. I never knew anything like that. And that encourages me to go online to look for more information that he said because they are all new to me.</i>
Tiffany	<i>Before I saw my American's photo, I thought she might not be a real person. And after the third email, she told me the problem she has with her younger brother and it was the same with mine. I felt more closed to her and we talked more just like my friend in Taiwan. It is very strange but nice to know we have the same problems in our lives.</i>
Luisa	<i>I enjoy the email writing. Even though I needed to spend about one hour for each email, I can think what to write and do some research on the internet. There is so much I want to tell my keypal but just not enough time and English words.</i>

Table 4.3: Pupils' responses toward the email exchange in the group interview

Ruth's comment compares the knowledge gained from the email exchange to the 'unreality' of television or textbooks. She focuses on the first dimension of Byram's model i.e. knowledge. Kevin also focuses on knowledge dimensions but points out the way in which the interaction with the American student prompted him to do further research. Tiffany also focuses on what is real. There is a stronger emotional content to her comment and in relation to Byram's model she is showing more of an intercultural attitude. Luisa expresses a positive view although he points out the extra investment of time needed.

The cultural information provided by the American keypals' writing was more challenging than the simplified version the Taiwanese pupils were normally accustomed to in their language textbooks. The pupils expressed that the real and

personal factual information motivated them to extend their learning outside of the classroom and search for more with the assistance of technology without the limitation of the textbooks.

As Jenny and Kevin mentioned in their interviews as follows:

Jenny	<i>After participating in the project, I spent more time going online to look for information about America according to the topics that my American keypal mentioned in her writings. I would also attach pictures of Taiwan or related topics in my emails to provide her more information about the things I was referring to, especially the food and the tourist resorts in Taiwan. She always liked to ask me questions and that encouraged me to do more research in order to answer her. That's what we can't have in the textbook.</i>
Kevin	<i>I normally spent a lot of time playing online games. After joining the email exchange, I spent more time searching for the information that my American friend showed in the writing.</i>

Jenny (as with Kevin's comment above) was motivated to do more research. In this second comment Kevin repeated his readiness to do research even at the expense of other leisure activities.

The pupils (82%) had commented in question 12 that this project challenged them to express what they wanted to share with their American keypals in terms of the life and living in Taiwan. For instance, in the seventh to ninth email exchange, information about the geographical locations, climates and tourist attractions was compared between these two countries. Even though most of the Taiwanese pupils had learned the names of the states in the USA from the textbooks, almost none of them had clear ideas about the location or any other more specific information. As Joel expressed in his weekly journal,

"I am curious about the state, Philadelphia, where my partner lived. I knew nothing about that state before. The only states in America I knew were Texas due to the fast food restaurant here and California due to the fruit advertisement. The new state sounds strange, but also real because I have a new friend there now. I would like to learn more about Philadelphia." (Joel, reflective journal, week10)

The limited information that the pupils learned in the normal class was expanded. The exchanged geographical information about USA and Taiwan enhanced their mutual understanding. And pupils with different language proficiency shared their knowing and speciality in different subjects. Tom was great in geography study and assisted the researcher to conduct a geography lesson to introduce Philadelphia during the group discussion. He reflected that *“It’s great to show my classmates what I know even though my English is not good. I used Google map to locate the American school and we can see it through Google earth. It’s a good way to learn instead of memorising the places that we might never be in our whole life and I want to learn more”*. (Tom, reflective journal, week 11)

On the other hand, all of the American pupils were very curious about the difference between China and Taiwan because they knew little about Taiwan and thought Taiwan and China were the same. Tom also led another discussion through showing a Google map to identify the location of Taiwan. It demonstrated that Tom started to use his strengths about technology and think about different ways to show where he was from and share with others. It was only an example in the collaborative learning for brainstorming to generate the idea but everyone was so amazed. The feedback from the group boosted his confidence about getting more writing done to share with his keypal. As he reflected on his learning journal,

“I knew this way from a link while I was thinking how to introduce the difference between Taiwan and China in a different way. I was happy that everyone liked it and I was also glad to share that with my friends. Now I need to work on how to write it in English to my American friend”. (Tom, learning journal, week 10)

There was another girl, Jessica, who was good at Taiwan history and made a chart for her American keypal in order to explain the history background of the complicated political situations after the second war world. She encountered difficulties in expressing the notion and the different dynasties and eras in English. However, the teaching and searching made her have a sense of belonging and encouraged her to extend her knowledge more. As she expressed in her learning journal, *“I am so excited to share what I have known with my keypal. It is difficult to explain the complicated politics to her. However, she is patient and asked me some questions which I never thought of before.”* Not all of the pupils did have the insightful knowledge about their own history. During the group discussion, the researcher invited Jessica to share her chart and this led to further discussion.

According to the critical friend's comment, she provided a good observation of the lesson.

“Even though the lesson was mainly conducted in the pupils' mother tongue, Chinese, due to the complicated topic and pupils' English ability, the pupils had more discussion about the differences between Taiwanese and Chinese people, the difficulties for Taiwan to be recognised as an independent nation etc. This extended the pupils' way of knowing and the pupils tried to apply what they have learned in the group into their own individual email writing and the teachers provided more individual assistance regarding individual differences.” (The critical friend's observation note, week 14)

The pupils also introduced the geographical location of Taiwan and their hometowns to their partners. To better illustrate their points, some pupils tried to draw comparison between the two cities and found out that both places are located in the northeast and used to be the mining towns in the past. For instance, Cindy wrote,

“My town is in the northeast of Taiwan, which is 50 minutes by train away from Taipei, the largest city in Taiwan. It has the tallest building in the whole world, Taipei 101. However, I was born in Yilan. It is a very beautiful city with a lot of hot springs. It is like the little Japan in Taiwan. Do you like hot springs?” The analogy might not be correct but the student tried to express her meaning. It showed that the pupils tried to link the factual information they knew and express herself to her keypal. Her American keypal replied, *“Your place sounds nice. It would be great to visit there one day. I never try hot spring. How's it like?”* That was a reinforcement for Cindy's learning and the examples like this could be seen in their correspondence from time to time. Through using the Internet as a medium, people from different cultural backgrounds could extend their knowledge and try to understand one another without being constrained by books.

The climate originally was not a topic that the Taiwanese pupils were enthusiastic to talk about. However, when the American started to ask more questions like “do you have snow in the winter? How does it feel in the hot summer? What would you like to do?” the Taiwanese pupils started to discuss in a group and compared the difference of the climates in two countries. Peggy mentioned that she really wanted to live in a place that she could see the snow. She wrote, *“I always dream of living in a place where there is snow and we can play snow balls and make a snow man. It must be very beautiful to have white snow, right?”* Many Taiwanese

pupils were so anxious to know more about the feeling of living with the snow or even have 1 whole week off due to the snow. They could only visualise the scene from the pictures, television or the songs.

In terms of the culture parcel exchanges, the responses from the interview showed that the participants thought the culture parcel exchanges were exciting and made the communication more real. While discussing in class what gifts were suitable for their American keypals, the researcher guided the participants to think about their own culture and what items represented themselves and their own culture. The first parcel exchange, the pupils could not come out with too many ideas due to the lack of reflection on themselves and their own culture. They only came out with the moon cake to share with the American keypals. With the progress of the project, more discussion was involved in the lesson. During the second parcel exchange about the Chinese New year, the amount of the pupils' ideas was much higher. They came up with different options about the Chinese couplets, Chinese calligraphy pen brushes, the ink... etc.

While receiving gifts including Christmas gifts, Easter Eggs and candies, 24 out of 26 participants expressed in the interview that culture parcel exchanges were fascinating. There was 1 boy and 1 girl who complained about the first cultural exchange parcel with American candy. They wish that they could have something to keep forever instead of one time consumption. In spite of the complaint, it still demonstrated the interest they had about the gifts and wished things could turn out differently. They explained that the books and the school symbols are great because they can keep them as a great reminder from their American friends. This complaint turned out to be a form of appreciation of the exchange parcel.

Most of the email exchanges were based more on factual information exchange. There was one student, Julia, who showed much more enthusiasm in her correspondence. In her email extract, she provided her partner with detailed examples from her own experiences as well as factual information about what she understood about the school life in Taiwan.

“You asked me what I want to be in the future. Well, it is hard to decide right now. My father is a Geography professor in the university in Taiwan. I like what he does and want to become one. However, in Taiwan, we need to pass the national entrance examination to go to a good senior high school, and then go for another entrance examination to go to a university. We have vocational schools here. However, if I

want to be a teacher, I need to get good grades at the examination to make my dream come true. What do you want to do in the future? Can you also tell me more about how to become a professor in America? Do you need to pass the entrance exam to go to the good university? We just learn the school life in American in our textbook last week. However, it is quite boring for me because it is only about the school life in the high school and where they go to have lunch and what subjects they have. I googled a lot about the schools in America but it will be nice to know what you think. Write me back soon.” (Julia’s email 5 extract)

A longer extract from Julia has been included here because it is rich in content. In Julia’s email, she tried to communicate with her keypal about her own personal experience and not just provide factual information. She is writing specifically in answer to her friend's question with quite a long, detailed answer. She poses a question to her friend that is on the same theme making comparisons possible. Making comparisons is according to Byram's model one aspect that takes intercultural competence to a higher level. Through asking her keypal to compare this school system to hers in a more personal style that motivated her to learn this kind of information more than what has been taught in the textbook.

Among most of the email content analysis, most of the information was still limited. The message shown in the pupils’ writing was limited in the prompts provided by the teachers. Even though some of the pupils extended their own learning through the technology, almost half of the participants would just answer the teachers’ prompts without bringing in too many personal viewpoints. In the researcher’s reflective journal, the researcher noted that *“I should not expect pupils to be the experts to provide all of the factual information about Taiwan even though I think I have taught them and guided them through searching on the Internet with the prompt sentence and worksheet. The discussion between the pupils was great. Some pupils like Tom and Jessica contributed what they have known to the class. More good guidance should be provided by me and also allowing pupils to share their speciality is essential”* It showed that the well-planned and good discussion before the lesson was essential.

4.3.2 Attitudes of Curiosity and Openness

Byram’s (1997a: 57) refers to attitudes of curiosity and openness combined with the readiness to learn alternative perspectives on products and practices about the

target culture as well as the home culture (Byram, 1997a: 57). The ability to appreciate how something is perceived from an alternative cultural viewpoint is described by Byram as ‘decentring’. It means that learners need to decentre from their own culture and to see their own positioning from the perspective of another (Byram, 1989a; Kramsch, 1993).

From the group interviews, other pupils also provided different examples in their responses about their positive attitude.

Kevin	<i>I like this project. It seems that some boring and normal things become different and special.</i>
Joel	<i>I enjoy the email exchange learning. It gave me more things to do to challenge my minds.</i>

Some comments in Julia’s emails presented in Table 4.4 displayed her attitude of curiosity and willingness to engage people from another culture. She was not only willing to engage with her American keypal but was also intrigued to discover a different perspective from the other culture.

Email 1	I can’t wait to learn more about your culture
Email 3	I am very curious to learn more about your country and your life.
Email 7	Please feel free to ask me questions and tell me about you and your culture. I look forward to hearing from you
Email 13	I was so excited to hear from you and I really hope we can stay in touch this year! I have so much to tell you and so much to ask you!
Email 14	I am glad you like what I introduced about where to go in Taipei. I really enjoy sharing my lovely city with you and also I want to know where you like to go in your place. It is just like I can travel in your place with your eyes. Write me back as soon as possible, ok?

Table 4.4 Extracts from Julia’s emails

Religion topic is seldom included in secondary school curriculum in Taiwan. American pupils led the questions about what religions Taiwanese people believe in and pupils shared their beliefs in Christian and Buddhism in class discussion. During the Easter holiday, the American keypals’ emails and cultural parcel with Easter eggs,

cards brought more discussions and information searching. The majority of the Taiwanese pupils were Buddhists and with fairly little knowledge about Easter holiday compared to Christmas. Stephanie was intrigued to discover more about Easter.

“It’s so informative that you explained Easter for me. Apart from the fun of the Easter eggs with money and candy hunting, I learned Easter is the time that Jesus Christ was resurrected from the death. I knew Christ was born on Christmas’ eve, but didn’t know much about Easter. Thanks for telling me that. What do you enjoy the most during your Easter holiday? I can’t wait to hear from you again very, very soon.”
(Stephanie, individual email writing, week 20)

However, attitudes towards people from a different culture could bring unexpected reactions and could hinder communication and lead to unsuccessful interaction. The pupils in America and Taiwan shared similar interests due to the similar age and the influence of mass media. They could discuss something such as books, music, sports, and movies in the States. Even though the Taiwanese pupils could relate to the American pop culture due to the media, the researcher found out that some of the pupils tended to avoid the topics that they were not familiar with and simply changed to another topic without answering because they did not know how to bridge the gaps. For instance, American pupils were not familiar with the Korea and Japanese groups that some Taiwanese were crazy about and asked more questions about that. At the beginning, the Taiwanese were excited to share a little bit, the American asked in the following emails, then the Taiwanese pupils just changed the topic suggested by the teacher without answering the question and then the communication seemed to diverge and did not progress effectively.

4.3.3 Skills of Discovery and Interaction

Byram (1997) refers to this objective as —the ability to acquire new knowledge of a culture and cultural practices and the ability to operate knowledge, attitudes and skills under the constraints of real-time communication and interaction (Byram, 1997:61). Even though the email exchange was conducted in a friendly manner, at the early stage of the email exchange project, most of the pupils still found it difficult to engage their American keypals and a lot of the emails would end with the abrupt sentences like “If you have question, just tell me.” “Write me back soon”

“See you”. This kind of ending did not help to establish good communication and invite the partners to expand discussions.

After the email net etiquette lesson (Appendix F) provided by the teacher (the researcher herself), the pupils started to use polite forms of address, respectful formulations throughout the emails, courteous closing sentences and knew better about how to compose their emails to their keypals as time went by.

There was a good example in Julia’s email to her keypal and the researcher provided the analysis and comment in the brackets.

“I really like your last summer vacation in Spain. That sounds wonderful. We have 2 month summer holiday as well which I like to make the best of my time even though we still need to come to the school to have the extensive study to get ready for the entrance examination that they need to take after graduating from junior high school in order to go for further study. (She provided her personal views). What do you like to do the most in Spain when you were with your family there? (She asked question to encourage feedback). I really admire that you have the courage to go to different countries to experience things. I have only been to 4 countries (She answer the partner’s question). Where are the other countries in the world on your travelling list? (She offers another topic that she is interested in) Please share your dream with me and I would love to do that with you. I really look forward to hearing from you soon.”
(Julia, email extract)

Julia demonstrated great skills of discovery and had interaction with her keypal by offering her personal perspective toward a topic, encouraging the feedback in a friendly tone, and asking more questions to show interest and invited more communication. She has acquired the skill of bridging the gap between the friends in different parts of the world.

However, not every pupil could grasp the questioning or answering techniques as well as Julia. For instance, Tom was still struggling about the interaction with his keypal even though he has shown a lot of interests in the project. In his email, he wrote *“Hi, I am glad you like your school life. I like my school life. I always like to hang out with my classmates playing basketball, go cycling, and go mountain climbing. Write back to me soon, ok?”* He started by just saying “hi” and then went directly to the topic without the attempt to develop further comment or ask a question for the partner to answer or refer to.

Some pupils just provided challenging questions like asking for more about the American education system. They didn't realise that they needed to motivate their keypals to write back to them instead of just requesting abruptly in order to keep the conversation going. And also there are some complicated or vague questions to be asked as follows. "Tell me the American school system. I want to learn more." "My teacher told me that we need to learn some American culture. What do you think about American culture?" "Christmas is my favourite holiday. However, I had a very busy week and I have a lot of examination and work to do. How's your Christmas?"

They tried to provide their keypals with more personal views toward the topic and they would ask questions which could encourage feedback and answer their partners' questions and encourage them to write more about the topic that they are interested in. While pupils were able to show their skills of using language appropriately in email, the written correspondence could be done better.

Based on the analysis of the email writing, some strong interaction skills were displayed as part of their intercultural competence, like encouraging responses by developing questions as many as possible to make themselves understood and then also using examples from their own to elicit the feedback from others. However, the skills were not really taught in the class but through their own observation from the writing from their keypals or using the question guidance from the teacher. Therefore, there were still some weak interaction skills with short, not precise sentences without any examples for clarification.

4.3.4 Skills of Interpreting and Relating

Byram (1997) refers it to the skills of interpreting documents or events from the target culture and relating them to documents or events from one's own. Pupils' reflections in the interviews revealed their opinions about how they think of the project as follows.

Phoebe	<i>I enjoyed the email about food. I've known more about our night markets and even know how to make Taiwanese oyster pancake. I didn't know how to do it before the project. Through telling my American keypal about the food, I know more about our own food and start to cook a little bit. It is fun.</i>
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John	<i>The postcards I sent to my American friend made me know Taiwan is so beautiful. There are many places I don't know and I want to go and show more to my friends.</i>
Debby	<i>I like the topic about 'my house, town, and room' because there is a garden in front of my keypal's house and many plants. She said she likes to sit under the tree when she was back from school. She is lucky. In Taiwan, it's difficult to find there is a garden in front of a house because we live in the apartment. We really need to have more nature.</i>
Tony	<i>When I introduce my culture to my keypal, I feel I know more about my own culture and the American culture at the same time. It is very interesting how to see us through their eyes.</i>
Tiffany	<i>My American asked me why we had so many tests every day. And I asked him why he had so much time to play every day. I think I like his life but I need to get good grade in order to get a good job, and then I can have time to play.</i>
Edward	<i>I feel they have plenty of time to do the exchange activities, but we have to attend different exams and cram schools after school. I envy them. They have an open learning environment.</i>

Each of these quotes shows an element of decentering and reflection on their own culture. From the reflections, pupils expressed their feelings about their cultural knowledge communication through the topics in the emails and the cultural parcels. They started to gain more interest in knowing their American friends' ways of life and also tried to acquire knowledge about their own Taiwanese culture due to the difference. As Tony and Tiffany mentioned, they tried to compare and contrast the similarity and the difference between the two difference cultures through their questioning and answers to the keypals. No matter whether they liked what they are having or facing or not, they tried to explore more about the different cultures and gradually develop their own interpretation.

For instance, Cindy talked about entering 2 different language schools after school for preparation for the entrance examination for upper level of secondary school. That stimulated the American's curiosity about the school system in Taiwan. That provokes different discussion about education systems in two countries,

schoolings, and the choice of schools. Through the email project, pupils discovered a different image of pupils from their partners. They were surprised to find out that their American partners need to get up at 6 and get ready to go to school. They had the ideas from the television that American pupils seem to go to school very late and come back home early. The following response from Jessica was typical: *“I was surprised that you need to get up so early to take the bus to school. I thought the schools in America get more free time.”*

As for comparing the different traditional snacks, the three traditional Taiwanese snacks, "pearl milk tea", "stinky tofu" and "oyster omelette" raised a lot of interest and discussion. The American refers to the “stinky tofu” as the “smelly cheese” in American. A lot of Taiwanese pupils did not really try out the cheese because it was not part of the food culture. Kevin’s parents went to a local supermarket to purchase different kinds of cheese for Kevin to bring over to the lesson. It provoked more discussion. From the interview, it showed that not all of the pupils expected self-awareness to be one of the benefits from the project. Sherry expressed the view that “I learn much about the American pupil’s life, their country, their culture. However, what surprised me is I learn a lot about my own culture when my American keypal ask me some things I took for granted and never really understood in my culture, like why we have to go to clean the tomb for the ancestors, why we needed to pray, why we burnt the paper money, etc. I tried to learn about my own culture through answering her questions”.

4.3.5 Critical Cultural Awareness

Byram (1997) refers here to the ability to evaluate products, perspectives, and practices of the learner’s own and the target culture. Specifically, Byram (1997) introduces the sub-objectives of the development of skills to identify and interpret values in documents and events, to analyse documents and events, and to interact in intercultural encounters with awareness of differences in the belief systems.

When the researcher asked the pupils to name what they had noticed about the different perspectives or values between Taiwan and America, quite a lot of pupils answered in a vague tone. Alice 's comment is typical. “Well, I know we eat different food, different time for holiday, oh, they have more days off than we do. Hmm, there are a lot of differences.” Other similar comments are given in Appendix J.

After analysing the pupils' emails, it showed that not all of the sub-objectives could be demonstrated in the emails because the exchange targeted specific cultural tasks and did not aim at all the objectives outlined in Byram's (1997) model. It is difficult for the pupils to carry out the deeper and critical discussion with someone they did not really meet in a foreign language. Even though providing the group discussion to reinforce the pupils' knowledge of the culture and the skills of relating or generating different ideas for writing, the pupils were not fully ready to discover specific information about the target culture.

4.4 Research Question 3: What are the Participants' Difficulties, Solutions and their Suggestions about the Project?

One focus of this action research was to investigate how pupils experienced and felt about their learning through the whole email exchange project. The participants' responses in the questionnaire and the interviews at the end of the project indicated that there are several types of difficulties they encountered while participating in this exchange project. The difficulties could be classified in four categories in an ascending hierarchy according to participants' perceptions of difficulties: (a) language difficulties: they included unfamiliar words, expression problems, spelling problems, and translation problems; (b) time issue: insufficient time to do the project given the pressure of other school works or their personal busy schedule; (c) commitment difficulties: participants' delayed response to their keypals or lack of response from their keypals; and (d) technical difficulties: insufficient skills in using email website and slow internet access.

As for the time issue and the commitment difficulties, delayed response was a common problem. During the whole project, a few pupils tended to miss the mutual-established deadlines and did not reply to their keypals' emails on time. The contact problem resulted in a decreased number of regular exchanges during the semester. Mutual interaction with their keypals is the key issue to keep their motivation going. When there was no response from the other side of the world, the teacher needed to remind the pupils to be patient and also keep the learning process going through the process writing that involved the pupils sharing their thoughts and communication with each other first. An example could be found in the reflective journal as follows.

"Last week, Jane and Angelia complained that their American keypals didn't respond to their email in 3 weeks. I kept emailing the teacher and didn't get any answer, either.

I could only comfort them that they might be busy and we could still keep writing and show our concern. In the meantime, I would keep emailing the American teacher to understand the situation and also try to make the lesson go through group discussion.” (The Researcher’s reflective journal, week 12)

Luckily, the project had a nice twist after the long silence and it brought in a different topic for the pupils to communicate with one another after trying to contact the American teacher.

“I finally got the teacher’s reply after a month. She wrote back today and apologised that she was ill for a while and couldn’t check the progress of her pupils’ emails and felt sorry for the delay. I explained that to the class. After understanding the situation, we had a different topic to start with- how to keep healthy. We explored some Chinese massage and Taichi lesson in the class and they tried to explore more in their own time and share what they learned with their keypals. And they also wrote a wish you well’ mail together with some health tips to the teacher and I was proud that they could build up their empathy.” (The Researcher’s reflective journal, week 18)

Moreover, technical obstacles came out from time to time during the project and the researcher needed to find ways to solve the problems. The observation from the critical friend revealed that,

“I found out that some pupils were not familiar with the website and looked puzzled. And during the training session, the low speed of Internet access due to the heavy traffic in the school Internet made the lesson stop from time to time and that discouraged the pupils. (The critical friend’s comment, week 10)

The full version of this comment is given in Appendix K.

Thus, while doing the email exchange project, the participants tended to be troubled by linguistic and cultural difficulties the most, followed by insufficient time and commitment difficulties, and finally by computer skill difficulties.

As for how the pupils solved their difficulties, the ways can be listed as follows in Table 4.5: looking up in the dictionaries, consulting textbooks, searching on the internet for related information, consulting and collaborating with classmates, asking the family members or the teacher’s assistance.

Difficulties	Number	Solutions
1. Difficulties of expressing the content	22	Consulting a dictionary and textbooks Searching on the Internet to find out more related information Asking teachers and friends for help Collaborating with classmates
2. Unfamiliar words	18	Consulting a dictionary and textbooks Asking teachers, classmates, family, and friends for help. Go online to find the answers
3. Insufficient Time	12	Asking the teacher for help Plan ahead to get the writing down in time
4. No response from the keypal	10	Asking the teacher about the reason for lack of response from the keypal Writing the email to ask the keypal Just wait and be patient
5. Spelling Problems	9	Consulting a dictionary Asking teachers, classmates, family, or friends for help. Keeping in the notebooks as reminders
6. Delayed Response	8	Asking the teacher for help
7. Computer Skills	14	Asking the teacher or classmates for help Asking the IT teacher for help
8. Translation Problems	13	Asking teachers, family or classmates for help Trying to use Google translation

Table 4.5: Difficulties pupils encountered and their possible solutions

Apart from those difficulties the pupils were able to solve by themselves, most of them sought help from their teachers, classmates, friends and family to overcome other difficulties. These helpers played different important roles in aiding the pupils during the project exchange period. The family helped the participants in solving linguistic problems, in collecting related information and also in providing encouragement. The teacher played various roles in the project. According to the

analysis of the researcher's reflective journals, she felt herself as supporter, proofreader, email deadline reminder, letter format instructor, encouragement provider, netiquette and current situation informant, computer assistant, and writing consultant. In light of this, the teacher should provide the pupils with linguistic or cultural help, encouragement, computer skills' assistance, current situation explanation and deadline reminding, while classmates and friends can help participants with discussion of keypals' email and with vocabulary in order to facilitate the pupils to get the learning go smoothly. However, the research discovered that after the process writing sessions started, the classmates had more roles to play especially during the process writing, discussant of keypals' correspondence, and ideas provider, grammar and vocabulary proof-reader, English expression advisor, encouragement provider, translator, and discussant of keypals' correspondence.

4.5 Research Question 4: What are the Teachers' Reflections of Using Email as a Tool for Language and Culture Teaching?

The purpose of the fourth research question is to reflect on the teachers' perception of utilizing the email exchange project in an EFL secondary school. Findings are based on data analysis of the researcher's own reflection journal, and the suggestions from the critical friend and teachers in the same school. The data will be presented in the following two sections: (1) positive personal growth and professional development; (2) the constraints of incorporating email exchange project.

4.5.1 Positive Personal Growth and Professional Development

As the project progressed, not only did the pupils build up confidence to work with their classmates and their American keypals, but also the teacher (as the researcher) enhanced her confidence to collaborate with the teacher from another country.

Through the email correspondence, discussing and sharing teaching ideas with the American teacher, the researcher gradually communicated on a personal level with the partner as revealed in the reflection journal as follows.

Week 2	<i>After exploring the ePal.com, it really broadens my ways of teaching. It is a good website with lots of supports to learn how to collaborate with another classroom by email, powerpoint, chat, and weblog. The emailing system from Epal website with monitored accounts provided the protection for the pupils. In the email discussion today with the American teacher, Marion, she expressed the same thing. It's our first time to use this website. It looked a little bit confusing to start with and there were only 5 lesson plans suggested in the calendar. More discussions with Marion are needed.</i>
Week 5	<i>After introducing the pupils, my school and myself to the American teacher through emails, we started to share our own designed email topics. It's good to cooperate to collect some projects and instructional materials from ePals website. Not only my language skills, but also my communication skills are challenged.</i>
Week 7	<i>Teaching experience sharing. I am so glad that we could email each other almost every other day. She is a working single parent but very enthusiastic about using ICT in her classroom. Her process writing combined with 6 traits is very inspiring. It could be another way to help the pupils who can't really produce some writing without guidance.</i>

Learning with the American teacher through the Epal website for computer-mediated communication, sharing teaching values and ideas with each other and designing lessons together from different perspectives were important. These elements helped the growth in confidence growth in the researcher's mind about working together with other teachers she did not know around the world before the project and kept her enthusiasm and interests going on the project.

Regarding the use of the computer and Internet technology in English writing classes, it was an endless learning journey for the researcher because the importance of keeping up with current trends could not be neglected. She had such reflections of her own transformation in the reflective journals as follows.

Week 20	<i>Using power point to design the pictures for the festival / holiday teaching grabbed the pupils' attention, and their smile and willingness of learning motivates me to keep up with current trends. Seeing pupil learning and being able to present their work in class through technology is more enjoyable.</i>
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Week 23	<i>It would be good for me to revise the pupils' drafts before they post them on line, the understanding of the native English speakers will increase and hence the interaction might increase and last longer. Third, the pupils' self-preparation is imperative. The pupils should be prepared to use the computer. In addition, they should read more to upgrade their writing level and not just rely on internet.</i>
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Throughout the whole project, the critical friend observed the class from time to time. Her hesitation of using the email project in class was changed and she expressed the positive feedback in her journal as follows.

“Originally I questioned how the email exchange could be integrated into the class among the pupils who didn't have great English ability compared to the pupils in the big cities. After seeing the teacher's step-by-step endeavours to give the pupils some training to build up their confidence in emailing through the process writing and discussion, also leading them to explore the possibility through the Internet, I gradually changed my mind and would like to give it a try.” (The critical friend's comment, week 18)

Moreover, since the participants were from six different classes, the researcher also held teachers' meetings monthly to share what she had done in the project and get feedback from the teachers about their pupils in their own classrooms. The teachers commented that the participants became more active in their own English classes and the excitement of receiving the email from their American keypals influenced the other pupils who were not involved in the project and they encouraged others to participate in a future project.

4.5.2 The Constraints of Incorporating Email Exchange Project

Even though the majority of the pupils showed a positive response to the project, the researcher still experienced frustration in certain aspects like how to make the pupils concentrate on emailing during the class discussion. This was expressed in her journals.

Week 3	<i>During today's session, Tom and Kevin were playing an online game during the group discussion when I was helping with other groups. It's good that the group leader, Julia, tried to get them involved and informed me of the situation after class. Keeping the pupils motivated and interested in the project to learn English is my main concern. Most of the pupils with higher English proficiency could be highly active in emailing. Pupils with lower achievement sometimes couldn't pay too much attention and struggled with it. I should give more clear instruction and assistance for the pupils with lower English proficiency.</i>
Week 5	<i>Tom and Kevin came to apologise for their behaviours and expressed they reason for being noisy was because they didn't know what to talk about in the group. And they suggested if I can provide more examples before their group discussion...Their suggestion made me realise how to conduct the process writing discussion differently next time.</i>

The experiences suggested that the teacher should not only simply organise the exchange project, manage technicalities, but also needs to spend more time to guide the pupils to develop their thinking and communication skills so that they could benefit from the activity. This involves guiding the pupils to engage in discussions with each other in groups or as a class and also monitor them away from distraction. It is difficult to pay attention to different heterogeneous groups when the teacher needed to monitor large classes by herself and it is hard to control pupil chaos and maintain classroom management. Additionally the teacher had heavy workloads to prepare teaching materials. And it is not easy to train the pupils to adapt to collaborative learning situations and encourage pupils to take part in their group activities while they were not trained to do so in the normal lesson.

Even though the process writing discussion was aimed at learner-centred activities, at times it still involved some teacher-centred activities such as presenting information that the pupils did not have. The researcher could feel a lack of enough skills to implement the process writing skill with the group activities. Furthermore, monitoring pupils' activities outside of the classroom for checking email writing takes more time especially with the lower achievers or shy pupils. When pupils initiated the

activities that required time to be accomplished, the teacher needed to monitor pupils to work in groups for differential instructions to cater for different levels of pupils. Since the researcher was the only teacher to start with the project, she felt stressed and sometimes needed the assistance of others during the email project.

With large class size of pupils in one classroom, teachers used to cover the lesson with little interaction among teachers and pupils and just spend more time in lecturing in class instead of providing learner-centred activities that show that the teacher is not the only source of knowledge.

Furthermore, when the project began, the researcher thought that the Internet was the future trend and should be incorporated into teaching. However, as the project progressed, she recognised its disadvantages and tried a better way to integrate it into the lesson without giving the pupils a distraction.

“The computer is helpful in typing and writing letter. The Internet can find what we need easily and provide instant assistance. However, it is also distracting. There is too much information on the Internet and it takes the pupils too much time in searching for information. And although the pupils were told to avoid plagiarism, some of them simply translated the information from Chinese websites into English or copied information from English websites.” (The researcher’s reflective journal, week 15)

Based on the reflection, how to teach pupils to filter the information they found from the website and also find the way to digest it instead of copying it was a big challenge for the teacher. In the next chapter, a summary of the study findings, the implications with discussion of the literature review and frameworks will be presented.

Chapter 5 Discussion

5.0 Summary of the Research

This action research aimed to investigate how the email exchange project could contribute to the development of pupils' motivation and attitudes to English learning and cultural understanding among EFL secondary school pupils in Taiwan. It also explored the difficulties involved in conducting a project of this kind. A one-year email exchange project corresponding with American pupils was conducted at a rural public secondary school in northeast Taiwan and a total of 26 8th graders participated in this study. They were paired up with their American friends as keypals to correspond with through an educational website called epals.com. The data collected consisted of two parts: statistical quantitative results from the questionnaires before and after the project and more qualitative data from the pupils' interviews, weekly journals, the researcher's reflection, the critical friend's comments and pupils' emails to explore those results in more depth.

The main purpose of this study was to explore the pupils' perceptions with deeper understanding of the email exchange project and the factors that enhanced or hindered their motivation and attitudes to language learning. The project also examined the impact on their cultural learning. Four research questions were developed and the researcher will discuss the findings reported in chapter four and discuss them in more general terms in relation to the literature review. The main learning issues that emerged in the process will also be discussed.

5.1 Review of Main Findings

In the following section, the summary of the main findings will be presented and the implications will be discussed further with the combination of the literature review and the theoretical frameworks in chapter two. In the following section, the researcher will keep the same headings from chapter four for the purpose of cross-reference.

5.2 Research Question 1: The Participants' Perceptions of and Attitudes toward their English Learning during the Email Exchange Project

The majority of the participants agreed that the use of email communication with keypals from another country enhanced their motivation to learn English. Many

of them felt the project had improved their English. The project did not try to provide objective evidence of any improvement in English but treated the students' own view of their learning as part of their attitude and motivation. It was in line with the findings from other researchers (Fedderholdt, 2001; O'Dowd, 2007; Son, 2005; Warschauer, 1997). Based on the first research question finding from the questionnaires, interviews and the weekly journals, four major themes will be summarised in the following sections: enhancing motivation and confidence, increasing sense of audience, reinforcing collaborative learning and improving pupils' writing.

5.2.1 Enhancing Motivation and Confidence

The first theme showed the effectiveness of the email exchange project combined with process writing in a collaborative way to improve pupils' motivation and confidence in their English learning. As mentioned previously, this study was not primarily aimed at comparing the motivation and confidence level in pupils' English learning before and after the project through psychometric measures but to explore more how the pupils viewed the email exchange project.

From the questionnaire, pupils' interviews, weekly journals and the researcher's reflective journal, the results revealed that the pupils' motivation and confidence in the email writing gradually grew as time went by. The majority of the pupils expressed a high level of enjoyment in the project. It is clear that pupils were enthusiastic about the correspondence and felt personally connected with their email partners; it demonstrated that personal involvement is an important element in producing the best attitude to learning. It is in line with the positive attitudes of participants and also with other exchange projects (Legge, Wilkens, & Prosser, 1999). With increased confidence and opportunities for genuine purposive writing, it would increase motivation to write (Eblen, Mills, & Britton, 2004; Hertel, 2003).

Even though some participants expressed worries about their English email writing initially and had doubts about their participation in the project, the majority indicated that they became more motivated in English learning due to several reasons. Firstly, working with their classmates in the classroom through the process writing instead of focusing on the grade tests like the normal class, was the reason for them to gain more motivation and confidence as the project progressed. The collaborative approach in the group discussion was different from individual learning and formed a

scaffold to provide the pupils with a platform to exchange their thoughts and share their ideas without being judged but being encouraged by the researcher and their classmates. Secondly, pupils were motivated to write emails to their American keypals because they found writing emails in English “interesting” even though “frustrating” at the same time. The researcher was trying to build up pupils’ thinking and writing skills in the process writing and she found out that the majority of the pupils were very shy to express their opinions initially but then were more willing to challenge themselves conveying meanings in English after the process writing discussion. Thirdly, receiving feedback from the American keypals was the most rewarding experience and encouragement for their work. The connection with their American keypals and the encouragement given by them was a motivator for some of the pupils.

Furthermore, communicating with their foreign keypals was a real experience for the participants to practice language and explore their own as well as another culture in an authentic way. As discussed previously in the Literature Review Chapter, the educators’ ultimate goal is to stimulate learners’ intrinsic motivation “reasons for L2 learning that are derived from one’s inherent pleasure and interest in the activity; the activity is undertaken because of the spontaneous satisfaction that is associated with it” (Noels, 2001: 45). All of the satisfaction was not merely from the instrumental motivation related to the practical advantages of learning English, but the integrative motivation as the personal interest in the people and culture, and the intrinsic motivation as spontaneous satisfaction. The pupils expressed the view that the motivation to use the Internet to facilitate their writing is to be able to find out more information to communicate with the keypals. The motivation from writing for a real audience, and the motivation from the direct feedback instead of the artificial classroom environment, are all linked with the integrative motivation.

Based on the literature review, similar findings have been supported by various studies on email concerned with learners’ motivation and confidence, such as Warschauer (1995), Leh (1999), Fedderholdt (2001), Sabieh (2002), and Hertel (2003). They highlighted pupils’ higher confidence in written communication with native English speakers and motivation in learning culture. We can conclude that email communication with keypals cross-culturally has considerable potential to promote pupils’ motivation and confidence in English and cultural learning.

5.2.2 Increasing Sense of Audience

Initially, the teacher (the researcher herself) was in charge of the grammar and content correction for the pupils' email writing and this process took much more time and made the communication mechanical. Process writing was brought in during the fourth week to involve pupils in more discussion and to set up the scaffolded learning for authentic communication with the American keypals through preparing their writing. Pupils expressed in the questionnaire and the interviews that they started to be more aware of the audience than before participating in the study. The sense of audience led them to be more cautious about not only spelling, punctuation and grammar, but also the clarity of the content because there were real readers on the other side of the world to read their works instead of the sole reader, the teacher. Writing is not merely homework on the exercise books, but real communication.

Similarly, the researcher claimed in her reflective journal that the mechanical errors revealed in the pupils' emails were gradually eliminated as the process writing in the collaborative learning approach evolved. This was related to their change of attitude. The pupils were trying to take more responsibility for their own learning and writing with reminders and assistance from classmates. Bloch (2004) emphasised that "the internet allowed these writers to receive comments from a real audience with a real purpose but without the artificial constraints of a face-to-face classroom". This environment cultivated a sense of audience among the Taiwanese pupils in their writing process, and writing to their American keypals. It meant that the whole process was done with a real purpose without the artificial situation created by the teacher or depersonalised content in the course books. These positive comments from the pupils coincide with Cohen and Riel (1989) that because pupils in this project were writing for authentic audiences and for authentic purposes, greater care was taken in their own writings by themselves than if they had been writing solely for the teacher.

Furthermore, the feeling of not wanting to lose face among their peers urged them to double check their writing before the discussion instead of leaving them all to the teacher to fix the errors and never read again. The scaffolding step-by-step instruction from the teacher in process writing and more inspiration from peers provided more support without overemphasising error correction with pupils making fun of their peers or laughing at errors made by others. Lin (2008) suggested that the optimal teaching is to provide encouragement in language production and view errors

as a natural progression of language learning in order to lower the learners' affective filter in the classroom.

The importance of helping pupils develop a sense of audience and providing an audience has been stressed primarily in the area of writing and is also grounded in the recognition of the role of social interaction. As discussed in Chapter 2, social interactions are viewed as an integral part of the learning process (Vygotsky, 1978). Through social context like interaction in process writing discussion and email writing, the literacy experience of reading and writing takes place and pupils develop better understandings and communication.

The authoritarian role of the teacher still persists in many Chinese classrooms. This coincides with the finding of Anderson (2002), who pointed out that teachers' feedback to language learners is often regarded as the most essential. Taiwanese educational system is still a place in which pupils largely looked to their teachers as the main source of knowledge and all inspiration for learning, rather than looking within themselves or at others. This kind of classroom culture needs to be changed because different opinions can be equally valued instead of the same answers.

5.2.3 Reinforce Collaborative Learning

The results from the interview and the responses from the questionnaire showed that most of the pupils gradually became involved in the process writing in a collaborative approach. The collaborative learning and discussion was not familiar for the pupils in their previous learning pattern and some difficulties occurred initially. Affective filter of the pupils in secondary school is higher than the younger learners because they tend to be more self-conscious and feel embarrassed to discuss in groups. In order to lower their affective filter, the teacher provided step-by-step tasks for the pupils to focus on the activities instead of the final writing production.

As the project progressed, the pupils got used to the discussion and the majority were more willing to share and join the discussion instead of the teacher doing all of the talking. From the critical friend's comment and the researcher's reflective journals, it showed that the more interaction the learners had with their peers, the more learning took place in the classroom.

In recent Taiwan context, the government advocates collaborative learning based on the influence from Japanese scholar, Manabu Sato's lesson study and learning community (2012b). As Roschelle and Teasley (1995: 70) defined

collaboration “Collaboration is a process by which individuals *negotiate and share meanings* relevant to the problem-solving task at hand... Collaboration is a coordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem”. Due to traditional examination-oriented teaching in Taiwan, the procedure of English teaching is more goal-oriented and less flexible and still emphasises teacher-centred, teacher-directed instruction. This study using process writing and email exchange provided an illustration of Vygotsky’s (1978) zone of proximal development. Working alone, a pupil may not have been able to generate or articulate ideas as well as he could have when allowed to work collaboratively to talk about his writing with his peers. This action research intended to exemplify the use of email as a tool to improve attitudes to language learning. It was corresponding with what Nunan (1998) and Ellis (1994: 44) claimed that learners’ involvement in the learning process is one of the essential elements to make foreign language learning successful and also indicates that target language communication becomes better when learners “model their speech with peers rather than teachers or parents”.

5.2.4 Improvement in Attitudes to Writing

The majority of pupils indicated a high level of enjoyment throughout this whole email exchange project. Every component in this project played a crucial role in the overall improvement of the pupils’ attitudes. The results from the data indicated that the email exchange project improved pupils’ confidence and motivation.

Some pupils would still struggle with finding the right words and expression; however, the progress in attitude could be seen in the analysis of their email writing. They modified their written examples after the discussion in the group and also emailed back the teacher with the final emails before they sent them out. In this case, they felt more confident with the support. Additionally, receiving feedback from the American keypals’ was a more effective way to help the participants to see what they needed to respond to. These findings are consistent with two of the theoretical frameworks discussed in chapter 2: the Input Hypothesis proposed by Krashen (1982) and the Output Hypothesis proposed by Swain (1985). According to Krashen, he stated “when communication is successful, when the input is understood and there is enough of it, I + 1 will be provided automatically”.

Further, the Output Hypothesis (Swain, 1985) that was proposed as an addition to the input/output hypotheses predicts that learners need to be pushed in their output in order for acquisition to occur. In this study, EFL pupils received and replied to email letters in English with the native-English speakers. Input and output was generated through the email exchange project.

The findings in this study corroborate with what Warschauer (1995) suggested, which is that correspondence through emailing has been proved to be a high motivator that stimulates pupils in terms of reading and writing. These findings also supported other findings from Greenfield (2003) and Shang (2007). However, their studies only indicated positive results on ESL/EFL linguistic performances among college level learners, without examining beginning EFL learners below secondary school level. And that is exactly what was found in this action research.

5.3 Research Question 2: The Participants' Perceptions of and Attitudes Regarding Using the Email Exchange Project to Develop Intercultural Learning

The second conclusion to be drawn from this study is related to the pupils' perceptions of the effect of utilising the email exchange project to enhance their intercultural learning. There are five elements to be discussed as follows.

5.3.1 Knowledge of Social Groups and their Products and Practices

Based on the analysis of the questionnaire, the reflections from the pupils and the researcher, and interviews, the data showed that the email exchange project made a contribution to learner' knowledge of the target culture.

Roberts et al. (2001: 42) reminded us that the traditional approach to cultural information in foreign language teaching could be: "essentially book-based information, usually presented as facts in an unproblematic way and abstracted from the everydayness of people's ordinary lives". And the type of cultural personalised information portrayed by American keypals was quite different from the simplified versions that the learners learned in the textbooks. Therefore, first-hand information from the authentic communication with learners of the target culture is essential. The email exchange project is an extension of factual knowledge from textbooks for pupils to learn more about another culture and also bring facts and real experience together.

The researcher was aware of the danger of essentialism and stereotyping in intercultural learning through dealing in specifics rather than generalities. Knowing the American keypals individually from their email writings and power point projects, and comparing and contrasting with Taiwanese home culture was done to avoid the stereotype and aim to reach a 'third place' as discussed in 2.4.1.2. Kramsch (1993) suggested that learners should be able to make their own reflection of their native culture and the target culture to reflect their personal perspectives to have "the ability to interact across cultures and to reflect critically and engage with otherness" (Scarino, 2000: 9).

Furthermore, Byram (1997a: 37) suggested that this type of knowledge for intercultural competence should include a more critical approach towards the cultural products and practices of a country. This involves "historical relationships between the home and target cultures, the national memory of the target culture, processes and institutions of socialisation, norms of social interaction, the country's institutions and its people's perceptions of them". The process can provoke pupils to have more thinking, questioning, and discussion and that is what is needed but still lacking in EFL language learning in Taiwan. At one level, it is well known that tea-drinking has different significance in different cultures, at another level a policy document on 'the centralisation of education' might be 'conservative' in one context and 'progressive' in another. "The significance of behaviour or document cannot be taken for granted." (1997a: 37)

The pupils found out factual, geographical information about America through their own online searching skills. Even though it might not be accurate all the time, they managed to handle this through referring to their experience and also comparing the schooling system to their own Taiwanese one.

5.3.2 Attitudes of Curiosity and Openness

The majority of the pupils agreed in the questionnaire that this email exchange project sparked their curiosity towards American friends and culture. They were pleased to have this opportunity to engage with native speakers and that experience sustained their curiosity and interests to explore more information about America. Through introducing Taiwanese culture to their American keypals and receiving feedback and questions for more explanations, the pupils commented in their weekly journals that the reflection on their own Taiwanese culture was what they

did not expect before. As Risager (1998: 244) suggested, the teachers should encourage the learners to be able to: “develop a reflective attitude to the culture and civilization of their own country. The teaching may be characterised by attitudes of cultural relativism, the wish for a non-ethnocentric view of the countries involved”. Through the discussion of the school systems, taboos, and the different ways of celebrating the holidays, the difference between Chinese and Taiwanese cultures, it enhanced the pupils’ openness to different opinions and values and also challenged their knowledge of themselves and others without taking everything for granted.

However, not all of the pupils could keep an open attitude towards different cultures. There were a few pupils who chose to avoid interaction due to the difficulty of elaborating their own ideas and culture with more details. They expressed that they did not know how to continue the email exchange due to the differences even though they were excited and curious at the beginning. This reflected another important issue to be considered, and that is to bring out the act of decentring (Byram, 1997), the willingness to see that their perspectives towards others is not the only way to interpret and being aware of some other possibilities to view things, and also being able to question and challenge their own values. The findings suggest that more training and discussion should be conducted in order to help pupils to decentre because pupils should not be expected to achieve openness automatically by themselves without guidance.

5.3.3 Skills of Discovery and Interaction

The researcher found out that the pupils tried to define understand factual information about America or their own Taiwan culture with some assistance through the email exchange project. However, their skills of interaction and analysis did not come automatically. The results showed that some pupils would often provide very simple comments to their American keypals’ writings and expressed the short personal feeling towards the different topics from their keypals. They also expressed their difficulties in developing the conversation with their American keypals in the questionnaire and interviews even though they seemed to build up a friendly relationship and were eager to know more about each other. This showed that more interaction and reflective skills should be used in order to guide the pupils to have a better communication with their keypals.

After some more net etiquette lessons and process writing lessons had been

conducted in the group discussion, the pupils expressed that they gradually applied what they learned to their email writings. Brown (2007: 220) suggested categorising types of questions and typical classroom question words based on Bloom's (1956) taxonomy. They are listed by level of difficulty, usage and critical thinking from the lowest level to highest, and adjusted into the chart form by the researcher as shown in following table, Table 5.1. This provided an excellent opportunity for assessing the progress pupils made during the process writing stage and also guiding them to develop further the critical thinking aspect so that their critical cultural awareness became ever more pronounced and developed. The extent to which teachers can guide pupils to this higher level of thinking plays an essential role in its success.

Questions	Definition	Common question words
1. Knowledge questions	Eliciting factual answers, testing recall and recognition of information	Define, tell, list, identify, describe, select, name, point out, label, reproduce, etc. Who? What? Where? When? Answer "yes" or "no."
2. Comprehension questions	Interpreting, extrapolating	State in your own words, explain, define, locate, select, indicate, summarise, outline, match
3. Application questions	Applying information heard or read to new situations	Demonstrate how, use the data to solve, illustrate how, show how, apply, construct, explain, etc. What is ___ used for? What would result? What would happen?
4. Inference questions	Forming conclusions that are not directly stated in instructional materials	How? Why? What did ___ mean by? What does ___ believe? What conclusions can you draw from...?
5. Analysis questions	Breaking down into parts, relating parts to the whole	Distinguish, diagram, chart, plan, deduce, arrange, separate, outline, classify, contrast, compare, differentiate, categorise. What is the relationship between? What is the function of? What motive? What conclusions? What is the main idea?

6. Synthesis questions	Combining elements into a new pattern	Compose, combine, estimate, invent, choose, hypothesise, build, solve, design, develop, etc. What if? How would you test...? What would you have done in this situation? What would happen if...? How can you improve...? How else would you ...?
7. Evaluation questions	Making a judgement of good or bad, right or wrong, according to some set of criteria, and stating why	Evaluate, rate, defend, dispute, decide which, select, judge, grade, verify, choose why, etc. Which is best? Which is more important? Which do you think is more appropriate?

Table 5.1: Categorising type of questions and typical classroom question words

As Fischer (1998) suggested, participants in email exchange projects should be trained with the skills of ethnographic interviewing in order to discover more from their partners. These types of skills are not taught but essential in conducting deeper conversation and they will require pupils more time to master this kind of skills.

5.3.4 Skills of Interpreting and Relating

The email exchange provided pupils an opportunity to interact with keypals of the target language and to discover information in an authentic context instead of learning merely from the textbooks in the classroom. This intercultural communication gave pupils real discussion with deeper understanding about the culture they studied and reflected on their own culture. The pupils “took a journey of discovery and reflection where their understanding of the behaviours, beliefs, ways of interacting in their own and the other culture was exchanged...” instead of learning each others culture as “a checklist of knowledge” (Liaw, 2006).

For instance, the email partners compared and contrasted the difference and similarities between Taiwan and America school lives, the different snacks, drinks, etc. The pupils started to engage in “distancing”– a process where learners, through interacting with and answering questions from foreign partners, reflect on and become more aware of their own culture (O’Dowd, 2003). The self-awareness outcome is found in Teng’s (2005) study of an email discussion project between Taiwanese and

American pupils. However, the skills of analysis and interpretation did not come automatically through the email exchange. Bennett (1993) was against the limited nature of an understanding of culture where difference is recognised, but nevertheless minimised in order to highlight the ‘universality’ of human behaviour. According to Bennett, believing that deep down we all are the same is not an adequate response to cultural difference.

5.3.5 Critical Cultural Awareness

The data from the pupils’ writing contained a lot of factual information about America. However, sometimes, it showed some superficial exchange of information instead of inquiring or asking for more information with deeper understanding. From the researcher’s reflection and interaction with the pupils, she discovered that pupils had obstacles that prevented asking effective questions in order to require more information or get into deeper discussion. It might be due to the language barrier, but mostly, it was due to lack of training of the question asking skills in a teacher-centred environment. And also, how to describe pupils’ own Taiwanese culture was a challenging to most of the pupils. In weekly journals, they expressed difficulty in expressing their own home culture to their keypals. It demonstrated that pupils learn basic factual information through the email exchange project. However, attainment of deeper reflection of their own and other cultures, including their comparison and contrast, is still difficult for learners to do alone without clear instruction or guidance from the teacher. It was in line with Woodin (2001: 199) as “It appears that students are interested in their partners’ culture coupled with a desire to know more, but students do not seem to take the further step of a deeper analysis, such as questioning attitudes or drawing conclusions from information. It may be that in order to achieve these, students will require further support from their tutor”. Due to the pupils’ very limited critical cultural awareness, there was a need for developing necessary skills to cultivate pupils in future research.

5.4 Research Question 3: The Participants’ Difficulties, Solutions and their Suggestions

In this action research, the first step in a spiral is to identify an initial idea and find out the facts. In the beginning, the teacher gave instructions in class and the pupils wrote their email individually at home. The pupils would try to obtain extra

assistance from the teacher for their email writing and also expected the teacher to correct their grammar mistakes and provide changes for their sentences. The pupils responded that they were occupied with their daily school works and examinations and it was a heavier workload for them to begin with. After understanding what difficulties the participating pupils encountered in writing, the teacher implemented the process writing approach in the fourth week to provide the class culture to be less teacher-centred and to not be only lecturing on the basic techniques and methods for writing in English, but provided sometimes talks about different experiences with regard to life and learning English/English writing.

These were listed as follows: unfamiliar vocabularies, spelling mistakes, difficulties of expressing the writing contents, translation problems, insufficient time, delayed response problems, “no response” problems, lack of enough cultural background knowledge and computer skills, etc. Regarding language difficulties, previous research also showed that a necessary requirement for EFL/ESL pupils was to be able to use the internet to learn English and having at least a moderate understanding of the English language, which EFL/ESL learners don't usually possess. (Frizler, 1995; Ho, 2000; Li, 2000; Tseng 1999)

Wartchow and Gustavson (1999) claimed that the power to understand writing lies in actually performing writings' thinking, not in the exclusive observation of it. What practitioners of traditional writing instruction emphasise- correct sentence patterns and grammar correction- is not the focus of the process of writing (Liu & Chen, 2004; Min, 2005). Writing in one's mother tongue is a demanding mission already because writing skills are combined with several language abilities and cognitive abilities (Tseng, 1999; Zamel, 1983). Many scholars pointed out that writing and thinking demands an interactive structure that allows pupils to use classroom discussion, sharing and using a variety of grouping to accommodate pupils' involvement in the process. The activities of prewriting, drafting, sharing, revising, editing, and publishing have been proved to have a positive impact by researchers and also in this study (Liu & Chen, 2004).

5.5 Research Question 4: Teacher's Reflections of Using Email as a Tool for Language and Culture Teaching

The fourth finding is regarding the teachers' experiences of using the email exchange project, which is related to research question 4. The following are the two

themes: positive personal growth and professional development, and the difficulty and the constraints of incorporating the Email exchange project.

5.5.1 Positive Personal Growth and Professional Development

Through the project, the pupils had learnt how to communicate with their peers and have authentic interactions with native English speakers through concrete email activities. The teacher implemented input, production and feedback, which are key elements from Long's Interaction Hypothesis (1990). Based on Long (1990), Input refers to the language presented to the learners by their partners or native speakers. Production, or the output, is the language made by the language learners themselves. Feedback in oral or written form is the response provided by partners or native speakers to the output of the learners.

Furthermore, the teacher recognized that the email project kept the pupils motivation higher and the interaction among the class, the teacher and the keypals encouraged pupils to support one another to continue the email exchange project. This finding supported the research done by Kearsley (2000) that the use of computer assistance in language learning makes the classroom autonomous, interactive, social, collaborative, cooperative, communicative, and student-centred. It suggests that the email exchange project needs to be implemented not merely as a substitute for the subject learning but in conjunction with developing writing in order to bring out the best results.

The researcher believed that this email exchange project assisted her to understand how to collaborate and communicate with native-English speaking teachers through a global professional context as she discussed the email topics and designed materials with her American partner teacher. Furthermore, she dedicated herself by making more efforts to keep up with current trends in computer technology in order to find ways to enhance the pupils' approach to language learning. The Internet provides not only the pupils but also the teachers with unprecedented access to up-to-date information and resources. While pupils were using emails to have a real audience to enhance language skills and cultural understanding, the teacher herself also benefited from the professional discussion. Technology was essential in all of the engagements in order to share at a global level. She had her professional development through the project.

As Brown (2001: 43) advised, “the role of the teacher in CLT settings is that of the facilitator and guide, not an all-knowing best owner of knowledge, pupils are, therefore, encouraged to construct meaning through genuine linguistic interaction with others”. In this study, the teacher, as the researcher, started to change the classroom culture to be learner-centred and step-by step move away from the concept of teachers as the only resource of knowledge. As discussed in Chapter two, even though educational reform in Taiwan in 2001 placed emphasis on the learner-centred approach, the long history of test-oriented culture has led pupils to be more robotic in their thinking and it was difficult for this to be broken within a short time. Pupils were used to the teacher-centred teaching and it could not be changed overnight. However, with the step-by-step guidance from the teacher (the researcher herself), the practice brought a chance for the teacher to hear the pupils’ voices and they could hear others as well and it also shows the need for a change in the classroom culture.

Furthermore, computer-mediated technology places great demands on the language teachers to understand and keep abreast of developments in modern technology, especially the pedagogy of the Internet. Through the project, the teacher realized that a profound framework is needed in order to integrate the technology, pedagogy and content knowledge together. This framework, technological pedagogical content knowledge (TPACK) (Mishra & Koehler, 2006) was based on Lee Shulman’s (1986, 1987) construct of pedagogical content knowledge (PCK) to include technology knowledge. This development of TPACK by teachers is crucial to in order to have effective teaching with technology. A detailed discussion of TPACK is beyond the scope of this present study but it would make an appropriate focus for further research.

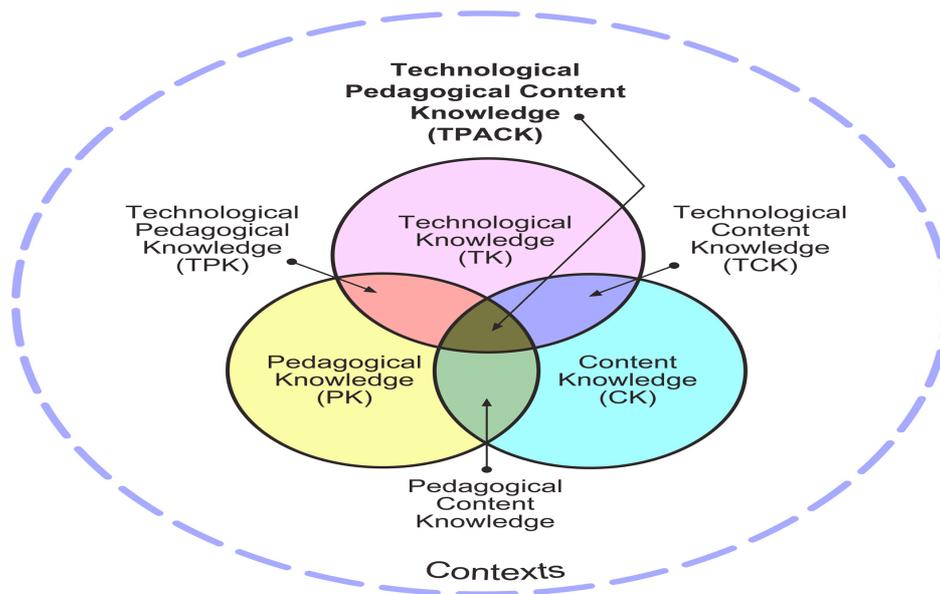


Figure 5. 1. The TPACK framework and its knowledge components

5.5.2 The Difficulty and the Constraints of Incorporating the Email Exchange Project

Monitoring pupil activities required time and considerable efforts to plan and implement as is mentioned in a previous study (Yoder, 2003). The researcher experienced some difficulties with the project and it was especially challenging initially to make some pupils concentrate or pay more attention to email writing if American keypals did not respond to their email promptly. Originally, staying and working overtime with those who were not motivated helped. However, it could not last for long. After process writing was implemented were two difficulties for the teacher to overcome: how to get effective writing in the classroom through scaffolding and how to provide a supportive environment in the classroom. The teacher tried to let pupils build their own models for writing in order for them to be able to remember instead of the teacher giving them the model.

Kern (2000: 234) advised that the role of the teacher in intercultural email exchanges “is to lead follow-up discussions, so that the chains of texts that pupils produce can be examined, interpreted, and possibly re-interpreted in the light of class discussion or subsequent responses from native speakers”. Apart from the suggestion, O’Dowd (2006: 284) further reminded us that “teachers need to lead classroom discussions, but they also need to explicitly develop learners’ knowledge and skills and cultural awareness by providing factual information, by modelling the analysis of

texts from the partner class, by helping learners to create their own correspondence and also by encouraging them to focus on the meanings which the target culture attributes to behaviour as opposed to simply focussing on the behaviour itself'. The role of the teacher plays an important part to see if the pupils can benefit the most from the exchange project. Merely linking the learners together with their language partners does not make communication happen automatically.

Furthermore, EFL teachers play an important supporting part in the pupils email exchange project. If the teacher is the only English teacher available, stress and the need for assistance is an issue. There was also a challenge related to the numerous technical obstacles like heavy traffic on the school website. The teacher needs to consider how to give email training to build up pupils' motivation and confidence in the process and gain cultural learning, and how to get the email exchange project incorporated into the regular curriculum. We need to take an integrated approach in order to maximise the benefits for the pupils' learning.

Chapter 6 Conclusion

6.1 Summary of the Research

This first chapter began with an introduction about this research, explaining the difficulties that Taiwanese pupils face, the purpose, the research questions and the significance of this research. Chapter 2 reviewed four major theories in this study: research on theories of modern language learning, the review of culture and language teaching process writing, and mostly the benefits and challenges of using email in the classroom setting. Chapter 3 established the methodology of the study and Chapter 4 presented the outcome of the attitudes to language learning and cultural learning through the email exchange project. The outcome was discussed in more general terms in Chapter 5 drawing on relevant literature and exploring the implications of the findings. In this final chapter, the contribution of the study, and the implications of the findings will be discussed, also the limitations of the study, and the recommendation for English teachers and researchers will be made for the future research.

6.2 The Contribution of the Study

6.2.1 The Contribution to Educational Policy in Taiwan

Most of the studies on email exchange projects were conducted in the context of English instruction in senior high schools or universities, and studies in secondary schools have been rare as mentioned in Chapter 1. This research has highlighted the practical implementations in secondary school in order to bridge the gap between theory and practice. As shown in Chapter 2, since 2001, the Ministry of Education in Taiwan (MOE) has announced educational reform to change the traditional teacher-centred approach toward more learner-centred style to improve the pupils' learning. In spite of all the funding provided to schools to purchase equipment, the top-down policy does not motivate teachers to put theory into practice due to lack of a thorough understanding of the pedagogy and instructional practice in the classrooms. As Chao (2004, 2006) reported, teachers are reluctant to fully embrace the trends of educational reform with IT issues, global education, cultural understanding, and inter-disciplinary integrations.

The email exchange project in this study shows its potential to help meet the education policy goals in Taiwan. This is because it relates to different aspects of

the policy goals of integration of information technology, intercultural understanding, collaborative learning and global education. At the thesis writing stage, the government announced a plan to put more efforts on international education and bring in the idea of a learning community through lesson study into the teaching improvement process. This initiative was originally from Japanese scholar, Manabu Sato (2012b), thirty years ago and it started to spread internationally. It advocates that teachers should collaborate with one another, to plan actual classroom lessons, to observe their own and others' classroom teaching and report feedback on pupils' learning. And that is exactly what has been accomplished through this email exchange project.

6.2.2 Improving Pupils' Motivation and Attitude to Language Learning

Authentic communication with real readers provides the pupils with motivation to read and write with reasons. In the questionnaires and interviews responses they expressed the excitement and joy of reading the emails. Pupils showed higher motivation to read and write, and enjoyed not only being exposed to different voices regarding the same topic, but getting to know foreign friends and another part of the world through words and the Internet.

However, at the beginning, the pupils struggled with writing due to lack of proficient language ability and training in the regular lessons. With the scaffolding during the process writing sessions, the pupils were supported with guidance from the teacher and discussion among peers in order to express themselves in the email exchange writing. With the support from classmates and the teacher, reading the emails was managed by the pupils themselves gradually.

The pupils gained more motivation and confidence about their email writing with their keypals. With the teacher's help, their positive attitude to writing developed over time and they were more liberated and empowered through the process writing not to worry too much about grammar or the pressure of exams, and the requirement of accuracy, instead, they built up a real communication and started to feel English is truly a tool for them to communicate and learn cultures. Some pupils even started to take the initiative to write more to their partners and suggested having more online friends. It showed the autonomy of the learners and high intrinsic motivation- the best way in learning.

6.2.3 Improving Intercultural Communicative Learning

This email exchange project was intended to facilitate the development of pupils' cultural learning in numerous perspectives. First, the email exchange combined with the culture parcel exchanges between the Taiwanese pupils and their American keypals contributed to their culture learning. It provided the learners with keypals' personal and factual information that was different from what they learned from their course books. However, Kern (1997: 75) also warned that these personal viewpoints expressed in email correspondence might lead to "superficial apprehension of foreign cultural phenomena" as mentioned in Chapter 2. Therefore, such personal information should still be counterbalanced with materials from textbooks and different resources. This exchange made pupils aware of certain aspects of Byram's cultural knowledge (1997a: 51) such as how institutions are perceived in the target culture, and what are the significant events and people in the target culture. Through the email exchange process, the pupils challenged their ways of viewing their own culture and others. Real communication happened in class and also continued outside of the classroom instead of just concentrating on mechanical drills for exams. Nunan (1991: 279) suggested the five characteristics of CLT as reported in Chapter 2, and this learning did provide interaction with authentic texts, the balance of the language and the learning process to link pupils' personal experiences with outside the classroom.

Second, the email exchanges provided discussion of target and home cultures. In language classrooms, cultural content normally tends to be focused more on the target language culture instead of the home culture. In this study, the pupils were encouraged to compare and contrast different values instead of using one way of viewing the world. During the process, they started to think and reflect on their own Taiwanese culture that they used to take for granted. There are two forms of decentring in language (Byram, 1989a; Kramsch, 1993a): one is decentring from one's own language and culture in communicating with others; and another one is decentring in the process of teaching and learning. Therefore, pupils' talking about their own culture is essential in order to recognise their culture before being open to a new frame. Even though the communication in the email exchange in this study did not show strong evidence of the project contributing to the development of critical cultural awareness due to lacking critical thinking training in their regular language lessons, it still challenged pupils' ways of perceiving things. As we are the products of our

culture, it is easy for us to view our perceptions as the only ways that things are supposed to be instead of re-examining them from other perspectives. Therefore, in order to develop pupils' intercultural awareness, teachers need to have a deliberate learning process for pupils to explore, and build up pupils' knowledge and reflective thinking skills to interpret their experience to reach the goal of decentring.

Finally, the pupils gradually changed their attitudes and way of knowing instead of just projecting their American keypals' images only through what they learned from the course books, television programs or movies. The direct and authentic communication with pupils' own keypals and the discussion among their classmates exposed them to another way of viewing other cultures. The pupils steadily developed flexibility instead of relying on a single linguistic and conceptual system. This study showed pupils could develop understanding about America and people through the social interaction instead of teachers imposing cultural facts or beliefs on them. However, teachers still played an essential role in scaffolding pupils' skills and providing more guidance during the process writing and email exchange process. The recommendation for the teacher will be provided in the next section.

6.3 Pedagogical Implications for Teachers and Educators

Based on this study, numerous implications can be provided for teachers who want to conduct email exchange projects searching to achieve the maximum benefits for pupils' attitudes and motivation for learning language and cultural learning. The seven pedagogical implications for teachers, educators and institutions are discussed as follows.

First, the importance of guidance from teachers should not be underestimated. This study showed that some pupils lost interest and motivation in the beginning when they thought they were left alone to finish the email writing without guidance from the teacher and without having the interaction with their peers and keypals. A well-planned project in a collaborative learning environment can lower learners' affective filter and motivate them to keep going. Kern (2000: 234) reminds us the role of the teachers in intercultural exchanges is "to lead follow-up discussions, so that the chains of texts that pupils produce can be examined, interpreted, and possibly re-interpreted in the light of class discussion or subsequent responses from native speakers". Teachers should not only be the *co-operators* to contact the instructors of the keypals, the *mediators* to follow up the process, but also the

facilitators to guide the discussion, and the *coaches* to provide prompts from time to time. The multi roles for the teachers to play are extremely important. Furthermore, having the email exchange project alone will not enhance learners' discovery skills, critical cultural awareness or capability to interact with others. How to guide the pupils to go through the learning process, discover their own and other cultures and build up the critical cultural awareness are main issues to make the projects work. And all of these skills for the teachers should be developed in the continuous in-service teacher training because teachers are the keys to a successful implementation of a project.

Second, process writing reminded teachers and pupils to focus more on the process instead of the final product. The authentic communication through email writing lowers the pressure of the examination and pupils could focus more on content instead of the grammar forms. It can be seen as another form of decentring in the teaching and learning as discussed previously in 6.2.3 in that teachers need to be able to see things from the perspective of learners. There should be more activities provided in order to engage pupils in the process and clarify some obscure points if they encounter obstacles. Generating ideas with pre-writing brain storming, searching information on the Internet efficiently, having peer review, providing comments in a constructive way, and putting their own thoughts into writing should be taken into consideration during the lesson planning and implementation.

Third, keeping track among the peers and putting the writings into portfolios is recommended during the email exchange writing. Even though each pupil took the responsibility to organise their correspondences systematically according to topics or by date, following pupils' email exchange regularly by teachers solely could be time-consuming. It is advised that pupils could be divided into small groups and the group leaders with higher language competence can help teachers lead discussion in the group, provide support and most importantly keep tracking. They can also have peer reviews and self- reflection on their own progress in the portfolios as an on-going record of their progress and growth. The portfolios can include not only written drafts, final writing, but also sound and voice recording to be shared with their classmates and their keypals. Using Google Docs, an online suite of digital tools, to share and comment for collaboration and immediate feedback, peer editing with cooperative grouping and small group fine-tuned writing instruction is recommended because Google Docs are collaborative and available at all times.

Fourth, teachers' constant checking of pupils' email writing could provide support for the pupils but it might also inhibit their motivation for real communication because pupils might hesitate about what they were going to write. Therefore, setting up a discussion forum on a blog, Moodle or even with social media like Facebook group or writing workshop through Skype can produce more brainstorming, and express pupils' thoughts freely outside of the classroom. The engagement with better interaction between teachers and pupils, and among pupils themselves would not be limited by time and space. It is also more convenient for teachers to post, share, and collect information. Through exposure to different voices instead of the solo voice from the teacher, pupils can have more learning through interaction with peers and keypals. And that is where the real communication starts.

Fifth, training lessons for pupils in advance and during the course are necessary such as the computer lessons for pupils who have less technology skills or computing skills. Even though there was the basic politeness rules training as Liaw (2000) suggested before the project proceeded, pupils should be reminded from time to time during the whole process in order to improve communication. Furthermore, some extra materials like pragmatics could be provided during the process writing session. The results have shown improvement, however, the communication skills still require more training and support. And the need for balance of writing to stimulate their thinking but not to hinder natural communication should also be taken into consideration.

Sixth, flexibility in choosing topics based on pupils' interests should be observed. As Warschauer (1996b) asserted, uninstructed exchanges tended not to be very efficient as pupils lost their interest over time, it is believed that the initial topics were still needed as some initial steps should be taken in advance. In this current study, topics and prompts were used to prevent pupils from experiencing writing blocks. Teachers can survey pupils' favourite topics by providing numerous questions to explore the answers and set them down at the beginning.

Seventh, the email exchange project should be integrated into the regular curriculum. As Tseng (1999) advised integrating the e-mail project in the regular curriculum can make pupils be more serious about the learning. And lessons can be incorporated with other tasks to make the whole learning more effective. For instance, two groups of keypals can read the same books, articles or news and then discuss them through email. And the selection of appropriate keypals in advance is necessary and

there are some factors needed to be taken into account, such as a similar level of language ability, similar age, and the interaction with the instructor of the keypals. The teachers could start the curriculum planning together before the school semesters start in order to be integrated well instead of being the add-on lessons.

Finally, apart from email exchange, pupils can share content through wiki and blogs and Facebook groups. More Web 2.0 tools can be used by teachers who should take the responsibility to improve their own skill-set proficiency and incorporate computer-mediated communication into English language instruction. The usage of Web 2.0 tools in a classroom setting can only help prepare pupils for the future. Teachers can bring the real world into the language classroom through encouraging pupils to participate in social networking. However, Prensky (2011: 7) also reminded us that educators and teachers should not get too caught up in technology as the panacea to improve pupils' twenty-first-century skills. He uses a "verbs vs. nouns" metaphor in his report as follows:

"...the 'verbs' are the unchanging skills of education, such as thinking critically, communicating effectively, presenting logically, and calculating correctly. The 'nouns' are the tools of education- the technologies that pupils use to learn and practice the skills. In the 21st century, nouns change with increasing rapidity. For example, for learning the underlying skills (verbs) of presenting, communication, and getting information, tools (nouns) currently used include PowerPoint, email and Wikipedia. But while the verbs will not change over the course of a student's education, the nouns certainly will. Our pedagogy needs to focus on the underlying verbs, while providing pupils with, and employing, the best, most up-to-date tools (nouns) to do so."

6.4 Limitations of the Study

In this study, the 26 pupils volunteered to participate in this project from six different classes and received communicative teaching instruction from the researcher (myself) on a regular basis. There was no experimental and control group in this study to compare the results. The intention instead was to focus on one group to explore their perceptions of and the attitudes towards the email exchange through this action research. Although the current study has yielded some positive results that have both theoretical and pedagogical implications of e- mail on secondary school pupils, the

research design still has several shortcomings and limitations with respect to the analysis and the data that may affect the accuracy of the results.

The first limitation concerns the assessment methods adapted in this study. The pupils' emails in this present study were not graded. This was in order to provide real communication and participation instead of making pupils feel the exchange was just like another assignment. The limitation is that although the pupils' self-evaluations on their own learning in the learning journals and the questionnaires provided satisfaction and sense of improvement on their learning, no robust data based on tests could be provided of their actual improvement in language – hence the focus on attitude and motivation in the research questions. Moreover it would not have been easy to confirm that any progress was purely from the email exchange project. It might be affected simply by their maturity in cognition during the lapse of English learning time. Progress in language is difficult to measure over such a period of time in the natural setting without supplementary and deliberated instructions. Not enough further discussions between the teacher and pupils were held to decide on pupils' real improvements, and relying on pupils' perceptions does not provide objective indicators of progression.

The second limitation is the instrument for data collection. More class-video observations during the process writing could have been used in order to gain a deeper understanding about the collaborative learning process and the discussion and dynamics among the pupils. The interpretative comments about the pupils' perceptions of and attitudes toward the email exchange project reflect only tendencies found in these research sites. Therefore, more critical friends as the observers could be invited to provide more objective suggestions. With multiple ways of self-expression, the teacher as the researcher can gain a closer look at the classroom interaction in terms of data analysis.

The third limitation is the small scale in this study and the particular characteristics of the participants. Since the study involved only 26 8th graders from a rural public secondary school in northeast Taiwan, the results cannot be easily generalised to all EFL secondary school pupils that limits the application of the results to other populations. For instance, the findings cannot be extrapolated to the different educational background and location, such as younger or older pupils in another big city like Taipei or other country and the results cannot be generalised into student-centred approach or other ESL contexts.

The fourth limitation is that the current study was not completely integrated into the English lessons as the participants were from different classes. In order to gain more benefits, the email exchange should be better integrated into the normal lesson design instead of the adding on lesson. Roberts (1995) reminded us that “when the email classroom connection processes are truly integrated into the on-going structure of homework and classroom interaction, then the results can be educationally transforming” (as cited in Warschauer, 1995).

6.5 Reflection as a Teacher and a Researcher

There are two types of reflection in this action research: one is what the researcher would have done differently in the study as a teacher in the next cycle, and another is the recommendation as a researcher for other researchers.

Firstly, the reflection from the researcher herself as a teacher in the teaching journey guided her to rethink the way to alter the classroom culture. The process writing came into the project in the 4th week but it brought more interaction among the pupils and the teacher. It provided the opportunity to depart from the traditional classroom culture and involve more peer interaction and learners’ autonomy learning. Therefore, the teacher would do the process writing earlier instead of after the email exchange started to build up pupils’ skills in terms of thinking, writing and communication. And integrating technology into lesson design, building new skills for pupils to promote their learning autonomy and increase their motivation for learning, can bring more possibilities. However, it can still be a disadvantage if teachers do not manage it well and might raise stress levels or affective filters for some learners who are not ready for it. After all, the same technology does not work for everyone. More differentiated classroom instructions and reflection are highly recommended. There are some questions worthy consideration: like thinking of the task and results before using the tool. How to improve the teaching or the learning intended in the lesson through technology other than emailing. Am I thinking of the task and results before the tool?

Secondly, as a researcher, a framework for teacher knowledge for technology integration is recommended for future research. The development of TPACK (technology, pedagogy, and content knowledge) is crucial to provide effective cultural teaching through technology. The three main bodies of the

knowledge: content, pedagogy and technology, the interaction of the three needed to be explored in order to bring success in teaching and learning.

6.6 Recommendations for Future Research

The researcher's experience in conducting this action study leads to the following recommendations for future research related to the effect of the email exchange in schools. Several suggestions are recommended for the future studies of utilizing email in the language classroom as follows.

1. It would be beneficial to replicate this study to examine the potential of email use in the classroom among participants in Taiwan at different educational levels, among various schools between urban and rural regions but with similar English proficiency levels. A larger study of population will enable researchers to gain more understanding of the effect of using the email exchange project in language and culture learning.
2. Further exploration is required to qualitatively investigate the nature of the interactions which took place between the native speakers and the EFL learners with different levels and follow up the participants after the study finishes to see if they still continue communicating with each other. The comprehensive assessment on pupils' language gains should be provided. Evaluating pupils' language acquisition is a complex and difficult process for researchers. The gap between pupils' actual performance and their perceived individual development may be analysed through various data like questionnaires, pupils' own email writings with peer evaluation, or pre- and post-project evaluation on some aspects.
3. In this research, there is no significant variation of the participants' family backgrounds as EFL pupils. Therefore, the demographic background was not used because there are no high correlations between the pupils' family backgrounds and their attitudes, performance and outcomes when participating in this email exchange project. Further research can review if the variation of pupils' family backgrounds will provide different results and study the correlation between extra after-school English classes or pupils' participation in the results as well. Future research can expand the quantitative model to review different variables of the exchange process such as gender, personalities, learning styles, learning strategies, the numbers of extra after-

school English classes, and the preference of email exchanges to do comparison of the differences between the pupils. It is believed that the outcome can shed light on the language teachers on when and how to use email in their classes. And the quantitative questionnaire results concerning pupils' motivation and confidence levels to learn English can be analysed if the pupils' participation and involvement in emailing are correlated with their improvement in scores in English proficiency after involvement in the email exchange project.

4. This study focused on language proficiency levels related to pupils' reading and writing skills. Therefore, future studies can investigate the effectiveness of email exchanges beyond its direct effects on reading and writing, but exploring the possible effects on speaking and speaking with the help of other telecommunication tools. Video-conferencing, on-line chatting through Skype or Facebook could be applied to provide different interactions among the participants. This study focused on communication through email exchange to improve attitudes to reading, writing and improve cultural understanding. The technology is proceeding all the time and other possibilities with new technologies of Web 2.0 tools and telecommunication tools with social media like Skype, Facebook, instant messaging tools, Moodle, discussion forums, video-conferencing or even use of smart phones for pupils should be tried out in future research in order for them to work on a wider range of components and to find out more about how communications are changing the structure of society and personal relations. A valid and reliable instrument to measure cultural awareness would enhance the findings of the study.
5. Future research could follow up pupils who choose to continue communicating with their keypals after the project ended. The follow-up investigation on pupils' voluntary exchanges should be investigated. In this action research, only the first cycle was conducted to have more reflection in future research in order to dig out more about how the pupils really learn and also change the action plan regarding to different difficulties which will occur along the way.
6. Collaborative action research can be undertaken by a group of teachers who discover a common problem and wish to discover the answers to the

introduction of a new curriculum, textbooks, assessment or a change teaching practice. Generally speaking, it should be a bottom-up process of discovery by teachers who determine what these specifics are in accordance with the appropriate statutory regulations. Addressing the needs requires discussion, reflection, and then implementation of a new approach to achieve the same goal instead of just following the top-down diktat. As Ferrance (2000) suggested that the result of collaborative action research is not only to improve teaching and learning, but also the development or strengthening of a community of practice and the culture in it.

6.7 Conclusion

The Internet and technology have opened up new platforms that allow us to learn language and cultures regardless of geographic locations. The English learning context in Taiwan as elsewhere means that most learners have little opportunity to practice English outside of the classroom. Despite of all the difficulties, this study explored how the email exchange can enhance or hinder the pupils' motivation and attitude to learning in terms of the language and culture and shows the practical implementation of using email projects in a secondary school classroom setting. It is essential not to see email in isolation, but it needs to be seen as an association with the real teaching in the classroom. In this study, the project integrated with process writing in a collaborative learning environment and it provides some pedagogical implication for the future.

There are three main findings in this study. The first one is practical methods from this email exchange project. Despite of all of the difficulties, this study has shown the practical implementation of using an email project in a secondary school classroom. And another key aspect is that the email exchange project should not be treated as an add-on activity but should be integrated into the regular classes. It is essential not to see emailing as an isolation tool, but as an association with the real teaching and learning inside and outside of the classroom. Furthermore, in this study, the project integrated with process writing in a collaborative learning environment and it provides some pedagogical implication for the future.

Based on the results, the language teachers interested in email exchange project should consider integrating the keypal into classroom curricula carefully instead of adding the project as an add-on extra classroom activity. Even though the

teachers might be inclined not to think of using technology in the classroom due to a lacking of understand fully of the practical methods, the outcomes from this study are positive. However, the help from technology does not come automatically. The teacher's role is essential and how to combine the thinking and writing process to build up a real communication and collaborative environment play the most important roles. The way of involving pupils in a more collaborative learning environment suits the new educational policy goal in Taiwan based on the white paper on International education for primary and secondary schools in Taiwan (MOE, 2012). Johnson, Johnson and Holubec (1994a) have suggested two reasons for ESL teachers to embrace technology: one is to prepare pupils to work in a world permeated with technology, and another one is to change the education to reflect need of the future workplace and society- especially trends towards collaborative and global perspectives.

Cultural learning can be difficult to be addressed in language classrooms. Simple mastery of the linguistic forms of a language is not enough for pupils to be considered to be competent in the target language or its culture. Languages are part of the cultural richness of our world and pupils cannot learn a language in a vacuum. This email exchange project contributed to mutual understanding between the pupils and the native speakers and also building up a sense of global citizenship. Through making contrast and comparisons, pupils gained better insight information about their own and others' culture and society. In this way, pupils learned to appreciate different people, communities, values, countries, and cultures and open up the possibility to fit the global society without just thinking from their own perspectives. Through the process writing in a collaborative environment, the pupils built up their way of enquiring and thinking, communicating with their peers and the keypals, and interpreting and reflecting on what they have learned. This project provided a learner-centred learning environment. However, the guidance from the teacher and the scaffolding of the lesson played a crucial role. When pupils are left to themselves with the communication with the keypals without guidance from the teacher, it is easy for them to lose interest in the process. In order to bring out positive results, well-organised instruction and well-controlled plans are essential.

Glossary

1. Communicative Language Teaching (CLT): CLT is an approach to the teaching of second and foreign languages that emphasises interaction as both the means and the ultimate goal of learning a language. It is also referred to as "communicative approach to the teaching of foreign languages" or simply the "Communicative Approach".
2. English as a foreign language (EFL): A person whose mother tongue is not English learns English as a foreign language if they study the language in a non-English speaking country. E.g. a Taiwanese in Taiwan studies EFL.
3. Electronic Mail (Email): email is short for electronic mail and often abbreviated to email, e-mail or simply mail. It is a convenient method of composing, sending, receiving and storing messages over electronic communication systems.
4. ePals (www.epal.com/): It is the Internet's largest global community of connected classrooms. It involves safe connection with other classrooms to collaborate and learn using protected email and blog solutions for schools and districts from anywhere in the world.
5. Email Keypal Project: An email keypal (computer keyboard pen pals) is like a pen pal but instead of using pen and paper to interact the pals use computer and keyboard, in other words email or some other form of electronic communication. Email Keypal Project is the way to link technology to the curriculum in a meaningful manner and offers the opportunity for the classroom doors to open and for pupils to explore the world through email interaction.
6. CMC: An acronym for Computer-Mediated Communication. This refers to the act of communication between two or more people through the medium of the computer. CMC includes the exchange of information through email, electronic bulletin boards, and computer conferencing. The term has recently become popularised to describe collaborative computer projects between distant partner classes.
7. Collaborative: Working in partnership. In the context of an email exchange, "collaborative" most often means working together with distant and local partners in order to realise a shared learning goal.
8. Information Technology (IT): A term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms, including those not yet conceived). It is a convenient term for including both telephony and computer technology in the same word. It is the technology that is

driving what has often been called “the information revolution”.

9. Telecommunication Activities: Telecommunication activities refers to cross-cultural communication projects that allow student of different linguistic backgrounds to work together to enhance culture understanding and exchange ideas through the use of technology. Pupils effectively learn about cultural differences in the target language by exchanging emails, visiting websites, or through audio and video teleconferencing. In addition, the participants learn about socialization through the communication and interaction among themselves (Wilkenson & Sherman, 1996).

10. Project-based Learning: Project-based learning is a teaching method that helps pupils develop their knowledge and learning skills through the use of real-life inquiry processes and active completion of tasks. The projects are centred on a learning theme and encompass challenging tasks to engage pupils and encourage them to collaborate in solving problems, making decisions (Markham, et al., 2003).

Appendix A Questionnaire in English and Chinese before the Project

各位同學好：在與美國同學電子郵件交換活動開始之前，請先回答此份問卷，此結果僅供研究參考，絕不影響課堂學期成績，請同學認真作答，感謝您的幫忙！姓名：_____ Name: _____

Part 1: Demographic Information 背景資料調查

1. How old are you? Male Female 你年紀為何? 男/女	13 14 15 (years old) Male Female
2. When did you start to learn English? 你從何時開始學習英語?	<input type="checkbox"/> 國小之前 <input type="checkbox"/> 國小_年級 <input type="checkbox"/> 國中 年級
3. Do you have any extra after-school English class? 你是否有上補習班加強英語文法或寫作的經驗?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Can you use computer at home? 你家中是否有電腦?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. Do you have Internet access at home? 你家中電腦是否能上網?	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Are computers difficult for you to use? 電腦對你困難嗎?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. How much time do you spend on computer every day? 你一天會花多少時間在電腦上?	0.5 hr, 1 hr, 2 hrs, more
8. What is the function of computers for you? 電腦對你而言功用為何?	Game, word processing, power point, the Internet
9. Did you have experience of using email with Chinese keypal? 你是否曾有交中文筆友的經驗?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Did you have experience of using email with foreigners before? 你是否有交英文筆友的經驗?	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. Did you have any other experience of using email? 你目前已有電子郵件信箱嗎?	<input type="checkbox"/> Yes, _____ <input type="checkbox"/> No

Part 2: Attitude and Motivation in English learning 課堂上學英語學習態度

1 Learning English is interesting. 學英語是有趣的。	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
2. I enjoy learning English at school. 我喜歡上英文課。	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
3. I want to learn English because English is a useful language. 我學英語因為英語是有用的語言	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
4. I want to learn English because I want to travel to the English speaking countries. 我學英語因為我想去英語系國家旅遊	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
5. I want to learn English because I can communicate with foreigners. 我學英語因為我可以和外國人溝通	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
6. I want to learn English because I like foreign TV programs, movies and pop music. 我學英語因為我喜歡外國電視電影及音樂	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
7. I want to learn English because I have the chance to go to a better school. 我學英語因為我可以上比較好的學校	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意

8. I want to learn English because I can learn foreign culture. 我學英語因為可以學到外國的文化	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
9. I study English on my own beside learning English in class. 除了上課之外我會自學英語	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
10. I am interested in using email writing to learn English. 使用電子郵件來學英語我來說是很有趣的。	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
11. I am interested in reading in English. 我喜歡學習英語閱讀	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
12. I am interested in writing in English. 我喜歡學習英語寫作	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意

Part 3: Open Questions

1. Do you like to learn English in class? If yes, why? If not, why not?
2. What do you think of using email writing to learn English?
3. What do you think to learn from this email exchange project?
4. What helps do you want to get from the teacher in your English learning?

Thanks for your cooperation! ~作答完畢，謝謝您的合作

Appendix B Participants' Consent Form

1. You are invited to participate in a research study conducted by Judy Wu under the supervision of Prof. Mike Fleming as a part of research for her thesis in Durham University to know how pupils develop their English ability through an email exchange project with American pupils.

研究目的: 您被邀請參與芳蕙老師的研究: 以了解與美國電子郵件寫作交換如何增進你對英語及文化的學習!

2. Your participation will involve

- a. the researcher's classroom observation in the class 會話課的課堂觀察
- b. one-on-one interviews with the researcher 一對一訪談
- c. group interviews with three of your friends/classmates and you
與你朋友一同參加焦點團體訪談
- d. keep a weekly journal 學習日記
- e. e-mail correspondences with the researcher and the American keypal
與老師及美國筆友的郵件

3. The entire procedure will last one year (Sep 2008-June 2009).

研究期程: 整個研究歷時一年, 也就是從今年九月到明年六月)

4. Your participation is voluntary, and you may choose not to answer any questions that you do not want to answer. 您是自願參與, 而且隨時可以退出不會影響成績

5. The researcher will do everything she can to protect your privacy. As part of this effort, your identity and the name of this class will not be revealed in any publication or presentation that may result from this study. 所有個人姓名班級資料都是匿名不會公開在任何出版品

6. If you have any questions or concerns regarding this study, or if any problems arise, you may contact the investigator.

As an informed participant of this research, I understand that: 我決定參與此研究

1. My participation is voluntary. I may cease to take part in this research at any time.

2. I am aware of what my participation involves. 我了解參與研究的具體內容。

3. All my questions about the study have been satisfactorily answered.

我個人關於這個研究的所有問題, 都已經得到滿意的答覆。

I have read and understood the above, and give consent to participate:

我已經讀過並了解上述內容, 並同意參與這個研究

Participant's Signature: _____ Date: _____

研究參與者簽名: _____ 日期: _____

I have explained the above and answered all questions asked by the participant:

我已經解釋上述內容, 並回答了所有研究參與者的問題

Researcher's Signature: _____ Date: _____

研究者簽名: _____ 日期: _____

Appendix C Parent/ Guardian Consent Form

Dear Parents,

Our class “An Email Exchange with American Friends” project will start in September. In order to keep your child to become a participant and his/her participation is voluntary. We need your consent and your involvement in helping him/her to have a productive English learning experience for this year. If you do not give permission, it will not affect your child’s English grade or any other learning at school. Please read and sign this parental consent form in order for us to continue our process of considering your child to be a participant. Your child’s involvement for this study is very valuable and we hope to find a good way to facilitate their best learning in English. If you have any further question or concerns about this activities, please don’t hesitate to contact me via judywu1111@hotmail.com or at school number :249xxxxx

Name of project: An Email Exchange with American Friends

I (full name of parent)

of

(address)

(email address) _____

give my permission for (full name of child)

to work for

(signature)

_____/_____/_____

(date)

Appendix D Questionnaire after the End of the Project

親愛的同學：本學年與美國筆友英語電子郵件交換的活動已告一段落，感謝同學的參與，最後請協助填寫此份問卷，所得結果僅供研究參考，絕不私自對外公佈，亦不影響課堂學期成績，請同學認真作答，謝謝您！

姓名：_____ 座號：_____

Part One: Self-evaluation of the learning of reading and writing and culture

1. The email project has increased my interest in learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
2. This email project has provided a real practice English language practice.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
3. This email project has improved my ability to communicate in English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
4. This email project has increased my chance to become acquainted with native English speakers.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
5. This email project has increased my motivation to continue learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
6. This email project has increased my confidence to continue learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
7. This email project has made me to be aware who was going to read the email.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
8. This email exchange project has motivated me to learn cultures from English speaking countries.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
9. This email project has helped me to learn more about another country.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
10. I would love to continue to email my keypal after this project.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
11. Through this Email project, I have changed my stereotyped ideas of American culture.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
12. Through this Email project, I have paid more attention on differences between American culture and my own Taiwanese culture.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
13. This email project has made me be careful about not making the same mistakes in writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
14. The responses from my keypal made me more careful about spelling, grammar and punctuation.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
15. I am interested in knowing about my keypal's personal and school life.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
16. The email project was a easy and interesting way to learn English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
17. The email project has helped me understand more about American than what we learned in the textbooks.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
18. I will participate in the similar project in the future to help my English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意

Part 2 participants' perceptions about process writing and the use of computer

19. The discussion in process writing lesson has facilitated me to think and write.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
20. The email exchange project has improved my writing	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
21. I am looking for to receiving my keypal's reply.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
22. I like to discuss and learn from the classmates during the writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
23. I feel might typing speed becomes faster after the project.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
24. I would like to write email more if we don't have the topic assigned by the teacher.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
25. I wouldn't know what to write if there were no guided questions.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
26. I am more confident in using computer and technology.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
27. I am more familiar with using email now.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意
28. I have learned some useful computer skills by using e-mail.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree <input type="checkbox"/> 非常同意 <input type="checkbox"/> 同意 <input type="checkbox"/> 無意見 <input type="checkbox"/> 不同意 <input type="checkbox"/> 非常不同意

Part 3: Open-Questions

1. What kind of difficulties did you have in the project? Anything else?

Difficulties of expressing the content	Unfamiliar words
Insufficient Time	No response from the keypal
Spelling Problems	Delayed response from the keypal
Computer Skills	Translation Problems

2. What ways did you use to solve the problems you had?

3. What kinds of support did you get from your classmates, family or friends?

4. What have you learned from this email exchange project with your American keypal?

5. Are you satisfied with this email exchange project? Why did you enjoy it?

6. Which part of it do you think can be improved?

7. Have you tried your best to participate in the project? If not, what is the reason for that?

8. Are you willing to participate in this kind of project in the future? Why?

8. Any other suggestions?

Appendix E Some Guided Questions for Semi-structured Interview

1. Why did you join this email exchange project? What benefits did you expect from it?
2. What do you think was the most important thing you have learned from this project?
3. Which parts during this project were the most helpful for you to learn English and culture?
4. What do you think of process writing discussion session?
5. What skills did you gain from this project that you will need in the future?
6. When you had difficulty in writing, how would you solve the problem?
7. How do you think this project helped you to learn English and culture?
8. How do you feel about collaborating with your classmates during the process writing?
9. Do you feel confident about using email and writing the email to your American keypal?
10. Do you want to learn more about using different technology to learn in the future?
11. Would you like to join another project like this in the future? If yes, why? If not, why not?

Appendix F Netiquette Teaching

1. Maintain one theme per email.
2. Write email with points and example. Be polite, reply to all legitimate emails. Do not write in capitals/bold/ underline and be careful using different text colours and especially highlighting text in yellow.
3. Respond to emails with clarity and in completeness, not selectively.
4. Appropriate Email communication, and it's shorter form as text message still provide insights into one's character and overall professionalism.
5. Use correct spelling, grammar and punctuation.
6. Don't send anything that will embarrass yourself or others.
7. Check your email box from time to time and reply soon after you have received another email. Do not expect a response "within hours" and resist "gentle nudges" for at least 24 hours.
8. Write in a tone as if were "speaking", use "dear" salutations and "best wishes" as closure.
9. Bring out some other new topics in the new email for better communication and interaction.
10. Please address your keypal's name correctly.

1. 寫一個有意義的主題，讓收件者了解信件的重點。
2. 電子信件內容要有重點，不相關的內容需刪除。段落之前要跳行，避免全部都大寫，因為大寫在電子信箱表示你在大生喊叫表不禮貌。
3. 行文都要有禮貌並且尊稱他人，不可流於批評或者是謾罵或是用俗語。
4. 不可寫出拿給父母、師長看了，都會覺得丟臉的信。
5. 寫完信一定要再校正，才可以傳送。可用電腦的文字拼字檢查功能或者再請父母、兄姐幫你再讀一次信，看看是否有不妥處。
6. 不可以傳送惡意、不雅、或任何令人不舒服的信件內容！
7. 要常常檢查自己的電子郵件或信箱並且盡快回信。回信讓寄件者知道你收到信了。
8. 回答筆友的問題時，稍微提及對方所問的問題，以勾起他的記憶。
9. 可以談及一些新的主題，以利雙方交談。
10. 請正確地署名。

Appendix G Some Examples for Guided Questions in E-mail Writings

Topic	Guided Questions
1. Self-introduction	<ol style="list-style-type: none"> 1. What's your Chinese/English name/nickname? 2. Where and when were you born? 3. What's your horoscope? 4. Can you describe your personality with 3 words? 5. How will your friend describe you? 6. What are your hobbies in your free time? Why do you like them? 7. What are your likes and dislikes? (Food, music, movies, books, sports, pets) 8. What will you like to do when you grow up? Why?
2. School Life	<ol style="list-style-type: none"> 1. How is your school life? Do you enjoy it or not? Why? 2. Can you describe your ideal school life?
3. My friend	<ol style="list-style-type: none"> 1. Do you like to make new friends? Why or why not? 2. What is a good friend? 3. Do you have any problem in building or maintaining your friendship? 4. Do you have any good friends? How did you meet each other? 5. Do you share all your secrets with your best friends?
4. Sightseeing	<ol style="list-style-type: none"> 1. Do you like traveling? 2. Where have you been for sightseeing? How was the trip? 3. Have you ever been abroad? Where have you been? 4. Are you planning on going anywhere for your next vacation? 5. What place do you want to visit someday? Why? 6. Do you prefer traveling by yourself or with a tour? Why?
5. Shopping	<ol style="list-style-type: none"> 1. What is your most interesting or terrible shopping experience? 2. Do you like to go shopping? 3. Do you always go shopping by yourself or with others? 3. What do you like to buy if you go shopping? 4. Where do you often go for shopping (e.g. department stores or shops, or online, etc.)? Why? 5. What do you think your American keys will buy? 6. How will you ask for a discount when the price is too high? 7. Will your American keypals do that in America?
6. How to apologize	<ol style="list-style-type: none"> 1. Have you ever had this experience? 3. Have you ever done something wrong? 4. What did you do to ask for forgiveness? Do we have different way to do in Taiwan/ in America?
7. Favorite show	<ol style="list-style-type: none"> 1. Have you ever watched a play? Which is your favorite one? 2. Who is your favorite actor/actress? Why? 3. Did you have the experience of being an actress? What role did you play? Was it fun to be an actress? 4. What role would you like to play if you were an actress? 5. Do you know any tips about improving one's acting skill?

Appendix H Results of the Questionnaire after the Project

Part One: Self-evaluation of the learning of reading and writing and culture

1. The email project has increased my interest in learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 26.6% 53.4% 12% 4.5% 5.5%
2. This email project has provided a real practice English language practice.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 21.4% 53.6% 14.3% 10.7% 0%
3. This email project has improved my ability to communicate in English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 28.6% 53.6% 14.3% 3.6% 0%
4. This email project has increased my chance to become acquainted with native English speakers.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 10.7% 42.9% 39.3% 4.6% 2.6%
5. This email project has increased my motivation to continue learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 42.5% 36.4% 1.1% 4.5% 5.5%
6. This email project has increased my confidence to continue learning English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 40.5% 33.1% 1.4% 3.6% 4.4%
7. This email project has made me to be aware who was going to read the email. 73	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 40.3% 32.7% 8.5% 4.5% 10%
8. This email exchange project has motivated me to learn cultures from English speaking countries.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 28.6% 53.6% 14.3% 3.5% 0%
9. This email project has helped me to learn more about another country.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 54.3% 28.8% 2.5% 4.2% 9.2%
10. I would love to continue to email my keypal after this project.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 41.8% 27.1% 5.5% 20.8% 14.8%
11. Through this Email project, I have changed my stereotyped ideas of American culture.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 21.4% 64.3% 12.3% 1% 1%
12. Through this Email project, I have paid more attention on differences between American culture and my own Taiwanese culture.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 25% 50% 17.9% 7% 1.1%
13. This email project has made me be careful about not making the same mistakes in writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 32.2% 34.7% 12.5% 10.5% 10.1%
14. The responses from my keypal made me more careful about spelling, grammar and punctuation.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 45.6% 36.3% 10.3% 5.3% 2.5%
15. I am interested in knowing about my keypal's personal and school life.。	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 34.3% 35.7% 19.3% 8.7% 2%
16. The email project was a easy and interesting way to learn English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 35.7% 39.3% 14.3% 7.7% 3%
17. The email project has helped me understand more about American than what we learned in the textbooks.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 45% 42.1% 4.3% 5.6% 3%
18. I will participate in the similar project in the future to help my English.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 43.1% 45% 3.3% 4.6% 4%

Part 2 participants' perceptions about process writing and the use of computer

19. The discussion in process writing lesson has facilitated me to think and write.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 7.1% 50% 25% 14.3% 3.6%
20. The email exchange project has improved my writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 28.6% 60.3% 7.1% 2% 2%
21. I am interested in receiving my keypal's reply and the cultural parcels.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 42.9% 50% 5.6% 2.4% 0%
22. I like to discuss and learn from the classmates during the writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 22.7% 72.8% 0% 4.5% 0%
23. I feel my keypal would reply to the content I asked.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 43.1% 44% 3.3% 4.6% 5%
24. I would like to write email more if we don't have the topic assigned by the teacher.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 35.3% 34.7% 19.3% 7.7% 3%
25. I wouldn't know what to write if there were no guided questions.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 33.1% 54% 3.2% 4.7% 5%
26. I am more confident in using computer and technology.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 35.3% 38.7% 15.3% 6.7% 4%
27. I have learned more words, grammar and sentences in the email writing.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 24% 51.3% 12.3% 12.3% 1.1%
28. I have learned some useful computer skills by using email.	<input type="checkbox"/> strongly agree <input type="checkbox"/> agree <input type="checkbox"/> neutral <input type="checkbox"/> disagree <input type="checkbox"/> strongly disagree 22.7% 72.7% 0% 0% 4.5%

Appendix I Email Example from Julia

Dear Maude

Did you get the package that we sent you? How do you think about that?

Here, I would like to tell you a funny sentence.

“恭喜發財- good luck and have a good fortune” You know that. But the children often say “good luck, give me money” during the Chinese New Year. We can get the lucky money in the red envelope from the parents or the elder relatives. So that is why a lot of children will say this during the Chinese New Year. But it doesn't just mean to get money from people, it also means to wish the people have a nice New Year with a good life without worrying about the money.

I tell you **these** information because everyone says this in Taiwan. Well, don't say it random to your elder I think. If they don't know the story about this sentence, maybe they will be angry.

Happy Chinese New Year!

Sincerely, Julia

Dear Julia,

Hello! This is Maudie, remember me? I'm your e-pal from America! I was so excited to hear from you and I really hope we can stay in touch this year! I have so much to tell you and so much to ask you! First of all, to answer your question about ice-skating, in my town, we love ice-skating! It is very popular here in the summer and the winter. Did you like it? I love it! Also, we actually have not learned anything about the Asian cultural; I don't know why. Anyways, how are you? How was your summer vacation?

This summer, I went to Spain! It was my first time across seas. The flight was extremely long, but I sat next to my brother so it was fun. On the plane, they have little television screen on every seat, so you can watch whatever movie you want. The time difference between American and Spain is six hours. So, when we got there, we were so jet-lagged. It was so amazing and beautiful there and it was so different than anything that I had ever seen! When we got home two weeks later, we all missed it terribly and we still do. Hopefully we will go back next year!!!

Also this summer, I went to a singing camp in New Jersey. Since I singing is my hobby, it was a great experience for me. The camp is very expensive and it is very well known. My parents said that the cost didn't matter, that it was the experience that matters. I was very close to getting a solo for the concert, but my best friend at camp got it instead, so I was still happy. In about two weeks, I am going to visit my friend from camp. We are having a big reunion with everyone from camp at another camp friends house. I can't wait to go back to camp next year!

School just started and so far I love it! Eighth grade is not too much different than seventh. There are some differences, such as, the homework is

harder, the expectations are higher, and you feel a sense of superiority. My friend and I are taking a class at the high school this year, which is very advanced for eighth graders. My favorite subject is English, but so far in English we haven't done anything that I really like, but it's early. What is your favorite class?

I just started reading the Harry Potter series, and I love it! Have you read it? It is a fantasy book about a wizard world. I just love the thought of that being real and sometimes I wish I was in that world. Have you ever wished that you could be someone else, maybe from a book or a movie? I have. Have you read any good books lately? Oh yes, I forgot to ask you, is there a marching band at your school? If there is are you in it? In my marching band I play the drums! I love it and this year, I love the songs that we are doing. We are doing eighty's themed music. Do you know who Micheal Jackson is? We are doing some of his songs with the high school, that is called combined show. I love being in band and there is a percussion group in our school that I think I am going to do this year. I really hope you get this email, and I hope you respond soon! It was great to hear from you, and I wish someday I could meet you!!!!

Your e-pal,
Maudie :)

Dear Maudie,

Wow, what a long letter you sent me. I was so excited to hear from you, too.

Your summer experience sounds really cool, singing camping and the Spain trip. I really envy both of your summer activities, especially the Spain trip. My dream is traveling around the world. I know it's too hard to fulfill, but at least for now, I hope I can go abroad, across seas and see different cultures. I like singing. Luckily, I have many chances to sing in the church, but I'm still not good at singing. Maybe someday, I can join a singing camp like you and train my voice.

Is ice-skating popular in your hometown in winter??? You have indoor skating rink? Or the weather is cold enough for ice not to melt?

My summer vacation has nothing special, We spent most of our time at school for preparing the basic competence exam. I didn't do well at this pre-exam at the beginning of this semester. You know the exam is very important to us in order to get into a good senior high school, so I'm very worried about that. Although I don't have "real" summer vacation, I still do some relaxing things during this time. For example, I saw many movies (My families rent the movievideos for me, so I didn't

spend any money) and read many fictions. I'm a Harry Potter fan, too. Yes, I have already read the whole series and some volumes I even read twice. I always dream I can be Hermione study in a fantasy castle and go adventure with Harry. She is really a smart and brave girl. I also see all of the Harry Potter's movies, except the sixth one so far. My friends said the movie isn't as nice as expectation, so I didn't go to theater to see this movie. It is too expensive and isn't worthy I'm waiting for the DVD to come out. Oh, there is a fun comment from my friends. They said the actor who plays Ron has become more handsome, but the actor who plays Harry has become ugly than he was young. How do you think about that?

You're right, I do read another novel "twilight" lately. It's a story about a common girl and a bloodsucker. I like the statement about bloodsucker, It overthrows the traditional story. It's a good book that you can read. The Chinese interpreter says a good sentence I really like: "To read makes imagination flying. staying up for a whole night to read an interesting good book is an enjoyment in life." (閱讀讓想像飛翔，徹夜為眠閱讀一本有趣的好書更是生活一大樂趣) I truly like movies and fiction, especially the fantasy and the mystery. How about you?

Our school doesn't have marching band. Most of our clubs are boring. But if I could play the drums in a marching band like you, that would be so cool. It's a pity that Micheal Jackson die in June. I just knew some of his famous songs like "beat it", "We are the world" and so on. Did you take photos or video about the combined show? If you have, could you send me the link?

One more thing, when is your birthday? Do you have any brothers or sisters? I still didn't know some basic things about you. Could you tell me more about yourself? Thank you, and I look forward to hearing from you soon.

Sincerely, Julia=)

Appendix J Some Pupils' Similar Comments with Alice's

Alice	Well, I know we eat different food, different time for holiday, oh, they have more days off than we do. Hmm, there are a lot of differences.
Lulu	We Taiwanese like food very much, and they American like sports very much
Joe	It is not easy to say that in a few words. I don't really know how to explain it
Kevin	We have different festivals: Easter, Halloween, Christmas, and we don't have a cafeteria at our school, but we have the lunch box. The ways for us to have the assembly are different. They could sit on the chair to see different performance, but we need to stand up to listen to the boring talks. I envy the way they have education, a big school with green, green grass and they don't need to clean the school toilets like we do.
Julia	The email made me to think more about Taiwan and Chinese culture. However, I don't know how to express myself well for them to understand. It's hard to use Chinese language already, not to mention to use English to explain it.
Tom	My keypal asked me if I eat dogs. My God, why would he ask me that? Originally I was angry. However, after the process writing session, I understand that they might learn from the internet. It shows that they are interested in Chinese culture. And I know some people eat dog. How can I explain that for them to understand we are not brutal?"

Appendix K Full Version of the Critical Friend's Comment in Week 10

“Even though all of the pupils have their email account, all are through Chinese email system, such as the Google Mail or Yahoo Mail in Chinese versions. The teacher has pre-trained her pupils how to use ePal which was an English website. However, I found out that some pupils were not familiar with the website and looked puzzled. And during the training session, the low speed of Internet access due to the heavy traffic in the school Internet made the lesson stop from time to time and that discouraged the pupils. It's nice that the teacher provided the hand-outs for the pupils to follow when the internet wasn't working. It is also good that the teacher suggested the pupils to type their emails first in the Microsoft word and save it. After they finished composing it, they visited the ePal website. They then cut and pasted the paragraph into the email and submitted it. In this case, they could always have a backup.” (The critical friend's comment, week 10)

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