CHAPTER 1

INTRODUCTION

1.0 Background and Context

> *"Moore's Law says that computing power doubles roughly every two years, and there is no end in sight. These advances are making possible some very interesting technological capabilities, putting us on the threshold of another significant development that will perhaps eclipse developments to date. We are witnessing the convergence of computers, communications technologies, and media into a totally new, synergistic something that promises to be infinitely more important than any of the technologies by themselves."* *(Bush and Terry, 1996)*

The past few decades have witnessed an overwhelming proliferation of technology in every aspect of our lives and language education is no exception to this. The use of technology in its varied forms inside and outside language classrooms is becoming a norm rather than an exception across various educational institutions. This widespread use of technology in education has manifested itself in various forms, via the Internet through multimedia learning, online learning, web-based learning, and information and communications technology (ICT) and more recently technology-

enhanced language learning (TELL). Though the Internet maybe seen as "pluralistic, chaotic, designed in detail yet lacking universal foundations or principles, continually changing, linked by centreless flows of information" (Relph, 1991, p. 104-105), one cannot deny the fact that it is fast becoming one of the primary media of literacy and communication practices in the current era (Shetzer and Warschauer, 2000).

Leading organizations like UNESCO and the World Bank share the view that the use of ICT is indispensable and must be managed in the most appropriate manner to facilitate access to quality education.

> "Article 12 of the Declaration of World Conference on Higher Education organized by UNESCO in 1998 states that "rapid breakthroughs in new information and communication technologies will further change the way knowledge is developed, acquired, and delivered. It is also important to note that the new technologies offer opportunities to innovate on course content and teaching methods and to widen access to higher education." (EI's Third World Progress, 2001, p.13)

In line with this opinion, governments across the world have been working towards the incorporation of information technology (IT) into education. In his first Policy Address, in October 1997, the then Chief Executive of Hong

Kong Special Administrative Region (SAR) emphasized the importance of IT for education and urged schools to equip students with the knowledge, skills, and attitudes required to meet the challenge of the next century. To meet such a challenge, he underlined the role of IT by stating that IT could be helpful in delivering better quality education by expanding and enhancing the learning environment (Draft Report, 1998). More recently, a report by the Working Group on Textbooks and e-Learning Resources (2009), states that the mission of the Hong Kong government is to promote the use of IT in education. The report states that, "One of its goals is to turn e-Learning into an effective learning mode. Through the extensive use of e-Learning resources, it aims to enhance students' learning effectiveness, develop their higher-order thinking and information management abilities (which include proficiency in searching, organizing, evaluating, and presenting information), as well as nurturing their capabilities for life-long learning, which would give them a competitive edge in our rapidly changing world" (Main Report, 2009).

Among various initiatives of incorporating IT, the Internet has been promoted by English language teaching professionals worldwide as a tool for language learning and practice. Language professionals and applied linguists have been working on seeing how the potential of the Internet and technology can be optimally utilized for enhancing the process of language

learning. Chapelle (2003a) suggests that changes in information and communication technologies have expanded dramatically the options for English language learning and teaching, thereby heightening the need for teachers to evaluate the learning opportunities through technology. As a result, with the ever-increasing growth of technology in language learning environments, it becomes important to study the following:

a) the factors, needs, and purposes for the adoption of technology,

b) the impact of the use of technology on conventional pedagogical approaches of language education,

c) the different types of technologies and their potential for language enhancement purposes, and

d) learner attitudes towards the technology-enabled second language enhancement

On the other hand, the number of internet users has more than doubled in the last few years. Although Warschauer (2001) asks whether computers should be used to teach English, or whether English should be taught in order to use computers, thereby moving language from an internal status to one where learners have genuine influence on their environment, the fact remains that the language of the Internet is still English and the importance of English for communication purposes cannot be ignored. In Hong Kong, English is

taught as a second language in schools and students comprise a quarter of Hong Kong's population. In accordance with these factors and in light of several education reforms taking place, it would be interesting to investigate the kinds of changes that electronic collaboration, globalization, and ICT would bring to English teaching and education reform in Hong Kong (Lee, Jor and Lai, 2005).

1.1 Socio-cultural context

In order to understand educational reforms and the language education policy in Hong Kong, it would be worth taking a look at the socio-cultural context of Hong Kong. In 1842, Hong Kong was ceded to the British Empire and became a colony. The government basically took a laissez-faire policy in education and did not try to get involved by running schools directly. As a result, many schools were run by religious organizations and associations of people from the same home prefecture. Chinese medium schools flourished due to the large influx of people from the mainland. However, with the booming of the manufacturing industries in Hong Kong, an important entry point in the Orient, the English medium schools rose in number quickly in this post-49 period. In Hong Kong, English was the only official language for more than 100 years, since it was a colony. Chinese was finally recognized by the Executive Council as an official language

though legally, the interpretation of a document, if in doubt, was always based on the English version (Lun, 2005).

Thus, English (the colonizer's language) and Cantonese (the local language) formed a diglossic situation in which both languages were used in different domains and for different functions. English was a prestige language for the formal institutions of government, law, education, and business, while Cantonese was used by the vast majority of the Hong Kong population as their usual language in family and other informal daily-life settings (Lai, 2005). With the political handover in 1997, the former British colony was now a Special Administrative Region (SAR) of the PRC (People's Republic of China). With this handover, the chief executive of the first Hong Kong SAR declared the policy of 'Biliteracy and Trilingualism' in October 1997, through which Mandarin Chinese or Putonghua was formally introduced into the sociolinguistic setting of Hong Kong. This resulted in significant changes in the Hong Kong education system.

1.2 The place of English in Hong Kong

A significant change after the return of sovereignty was that, as a gesture towards decolonization, the new HKSAR government announced the mandatory Mother Tongue Education Policy for foundational education from Primary 1 to Secondary 3. Although mother-tongue education had long been advocated during colonial days, this was never enforced until after the change of sovereignty. The new policy had effect on primary schools but its impact on secondary education was great since more than 70% of secondary schools were required to adopt Chinese as the medium of instruction while only 20% retained English as a medium of instruction. Since then, from a medium of instruction, English was now a core subject in the majority of the secondary schools (Lai, 2005). Nonetheless, despite the increasing importance of Putonghua, English 'still plays an important role in the business sector, in the workplace, and especially in higher education' (Lee 2005, p. 36). English is seen as the language that carries 'outer' values including 'success, stylishness, and academic achievement', while Cantonese is associated with 'inner' values connected with 'tradition, home and solidarity' (Pennington 1998, p. 13; in Glenwright 2005, p. 206). This distinctiveness leads Glenwright (2005, p. 206) to conclude that there is an incipiently triglossic language situation in Hong Kong, further noting that 'the position of English in Hong Kong society and its implications for

identity and education represent a particularly contentious and divisive issue'. But despite debatable issues, Hong Kong's overall attitude towards English can be summed up as being one of pragmatic acceptance of its economic and technical importance (Sewell, 2010). Moreover, this is less of an ideological matter and more a signification of its global importance (Talbot, Atkinson and Atkinson, 2003).

Nonetheless, there has always been an ongoing debate in Hong Kong about the perception of 'falling standards' in English. Compared with students in other Asian countries and in other parts of the world, the English standards of Hong Kong students are 'lagging behind' (Poon, 2000, p. 178). The perceived falling standards of English language proficiency have been a constant theme in political, business and educational circles in recent years in Hong Kong, and are perceived in all quarters of the education sector, ranging from teachers to primary school pupils to university students (Hiradhar and Gray, 2008). Partly, as a result of this perception, educational policymaking in Hong Kong has tended to follow the widely-held belief that standards need safeguarding. As a result, several initiatives have been adopted to explore various avenues to enhance language education with the incorporation of ICT in education.

1.3 Technology in the Hong Kong education system

Since 1998, three strategies on IT in education have been launched and a huge amount of resources have been allocated to make Hong Kong "a leader and not a follower in the information world of tomorrow" (Main Report, 2009). The overall goal of all these strategies was to see a "paradigm shift" in school education from a textbook-based and teacher-centred mode to a more interactive information-rich world. In 1998, the Education and Manpower Bureau of the Hong Kong SAR government issued the document entitled *Information Technology for Learning in a New Era* as part of the First Strategy on IT in Education. The strategy outlined four directions to promote IT in primary and secondary schools which included teacher enabling, curriculum and software, hardware provision and network infrastructure. The SAR government urged "inclusion of international experience in the curriculum" and called on teachers to make the most of the Internet and other information technologies to "maximize students' international exposure" (Lee, 2005). With the fruit of the First Strategy, the Government introduced the Second Strategy in 2004 that aimed at facilitating the learning and teaching of students and teachers, school leadership and the development of digital learning resources through the application of IT. Various stakeholders like the schools and the IT sector were encouraged to invest and take part in the development of quality

teaching and learning software. In another such initiative, the concept of 'Learning to Learn' was promoted in 2000 by the government and a lot of resources were used in refresher training courses to keep teachers informed of the latest developments of IT-based learning environments and development pedagogy (Lun, 2005). By the close of 2008, the Government launched the Third Strategy adopting the theme of "Right Technology at the Right Time for the Right Task". Human factors, not technology factors, were highlighted as the key to integrate IT into learning and teaching.

With the implementation of these three IT strategies, the development of e-learning tools such as online learning platforms and teaching software has been activated and has subsequently flourished. Corresponding to this, the mode of learning and teaching has also undergone changes. Since the government's first strategy, e-learning has been gradually integrated into learning and teaching. At present, majority of classrooms in a school are equipped with one set of computer connected to the Internet and a projector allowing teachers to use multimedia resources such as PowerPoint presentations, pictures, videos, audiotapes and animations thereby bringing rich online resources into the classroom (Main Report, 2009). Thus, with directives from the government technology has formed an integral part of the Hong Kong education system for almost more than a decade.

1.4 Technology in education at the tertiary level

While policy makers in the Hong Kong government continue to be involved in various forms of integration of technology into the education system, educators at tertiary institutions have been exploring the immense potential that information technology offers as a teaching and learning tool into their courses and curricula. At present, there are eight higher education institutions or universities in Hong Kong which are funded by the University Grants Committee (UGC). While a comprehensive, across-the-board research on the implementation of IT in higher education may not be available, there have been relatively specific and localized studies conducted by a few universities on the use of IT in higher education. A study conducted at the Chinese University of Hong Kong (CUHK) on students' use of IT revealed a positive perception and attitudes wherein IT was regarded as an important survival skill and useful tool (Draft Report, 1998). A similar study conducted by the Baptist University showed that more and more students were turning away from television and print media to the Internet. University students showed a higher Internet usage rate than other sectors of society (Lee et al. 2005). In addition to this, a research conducted by Lingnan University on the faculty's application of IT in teaching and learning in the tertiary institutions in Hong Kong in 1999 showed that while some faculty members tried to enhance teaching and learning with general

purpose IT applications, others used the Web-based course delivery software such as WebCT or another e-learning software (Lee et al. 2005).

In another study, evidence from e-learning activity logs of the Learning Management Systems (LMS) at CUHK indicated an increase in the adoption of simple e-learning strategies but a comparative decrease in the adoption of complex e-learning strategies which encouraged interactions among students (Lam, Lo, Yeung, and McNaught, 2010). Simultaneously, studies have also shown that applying IT or technology led to a marked improvement in their teaching and learning due to better dynamics, presentation, and interaction. Thus, studies show that although the mainstream use of IT maybe still in an information-based adjunct mode, examples of innovative and educationally effective uses of technology are evident across all universities (McNaught, 2011a).

1.5 Technology for language learning in Hong Kong

The medium of instruction in tertiary institutions Hong Kong is for the most part English (with exceptions such as many courses at the Chinese University of Hong Kong, and courses such as Chinese history and literature). Among various debates and discussions about the perceived falling standards of English in Hong Kong, Boyle (1997) points out, "For

several years, there has been a growing impression in Hong Kong that the standard of English is on the decline. School teachers, university teachers, and employers in the business sector all agree that their students and employees have a much poorer command of English than in earlier years." (p.163). In order to overcome the challenges of declining standards in English, there have been a host of initiatives from the University Grants Committee (UGC) as well as tertiary institutions across Hong Kong, where technology-enabled language enhancement projects form part of these initiatives.

In one such implementation of technology, students at CUHK were sent simple conversation questions each lunch-time during the semester. The messages were timed to arrive when students were likely to be gathered in groups for lunch. The questions sent to the students acted as triggers for discussion for a follow-up discussion which took place in the class. Students found this activity fun and engaging, thus leading them to speak English, although for a short time, outside the classroom. (Clarke, Keing, Lam, and McNaught, 2008)

An institution-wide initiative from the University Grants Committee (UGC) in 2007 led to the implementation of e-portfolios across English language centres in all the tertiary institutions in Hong Kong. Ever since then, e-

portfolios have been implemented for English language enhancement through self-access and independent learning. The UGC's design behind the sector-wide adoption of a system was to make e-portfolios a constructive element of student learning along with a representation of the academic achievements of students. With this initiative from the UGC, the language centre at the Lingnan University incorporated e-portfolios into its curriculum. With the adoption of e-portfolios on two key English language enhancement courses, students have been using e-portfolios to showcase evidences of their language learning (Hiradhar and Gray, 2008). An evaluation of e-portfolios for self-access and independent learning showed that with ease of use and operation, sufficient resources and support, avenues for interaction, feedback, and sharing, students were provided with an opportunity to enrich their language learning experience (Hiradhar, 2009).

In another instance, a study of 13 online discussion forums involving 1280 students was carried out. In each case, the forum was a key component of the course and teachers expected students to contribute. The courses involved in the study were in a number of universities in Hong Kong and ranged across a wide of number of discipline areas. In a similar study, students participated actively in the forums and contributed substantive ideas. The studies provided empirical data across multiple online forum

experiences to better inform pedagogy of using online forums. The findings suggested that asynchronous online discussion could be a useful tool for various teaching and learning styles for various course designs (Lam, Cheng, and McNaught, 2005).

Finally, among the relatively recent use of social media in universities in Hong Kong, in a recent study, 13 teachers developed hybrid learning designs involving social media and six designs involved students in the production of learning artefacts. The study revealed the opportunities provided by new media in supporting the development of important skills and capabilities to use language to describe one's own learning. (McNaught, 2011)

Thus, the implementation of technology in teaching and learning at universities in Hong Kong has shown evidences of students' understanding of the importance of interactions that lead to constructive dialogue. This shows that students are aware of the digital experiences that are most conducive to effective learning and thereby appreciate the diversity of the functionality of technology.

1.6 Technology for language enhancement at Lingnan University

Lingnan University is the only liberal arts university in Hong Kong with academic disciplines in cultural studies, history, philosophy, visual studies, social sciences, business administration, English language studies, Chinese language studies, and translation studies. The Centre for English Language and Additional Languages (CEAL) functions as a department that fulfills the English language needs of the students undertaking particular streams of study. It is important to note here that English is the second language for a significant majority of students. This defines the important role that CEAL plays as a language centre. The CEAL offers courses in English Language Enhancement not only to improve the English standards of the university students but also to facilitate them in pursuing their academic studies well. The courses offered are interactive and involve the use of multimedia and technology inside and outside the language classroom. Moreover, an important element of the courses offered is the independent learning which is facilitated by the use of the Multimedia Language Learning Centre (MLLC) and the Self-Access Centre (SAC). By virtue of utilizing the MLLC and SAC for self-access independent learning, students are exposed to various forms of technology in addition to being encouraged by their instructors to use different forms of technology. This exposure to

technology, which students gain for their English language enhancement, provides an opportunity for exploring:

a) student attitudes towards the use of technology for English language enhancement, and

b) impact and effects of technology-enabled language enhancement specific to English.

Investigating the outcome of this exploration could lay further grounds for directions in technology-enabled language enhancement for future implementations.

1.7 Rationale and purpose of the study

Barnes (1987) notes that, the pattern of tertiary-level language teaching in Hong Kong is subject to considerable influence, all pointing towards change and development. This is especially marked with the development of sophisticated technology, which brings about a shift in the discipline of applied linguistics - the shift in the role of the language teacher from instructor to facilitator of students' learning. Furthermore, there is a need for investing time on research and development, and in particular on the production and evaluation of suitable programs for students to work on, if

language teaching is to put new technology to efficient use. Furthermore, it has to be accepted that this development work will need to be continued, albeit at a slower pace, indefinitely into the future.

On the other hand, on explaining the use of technology for writing, Pennington (1996) states that computer technology not only functions as an important tool for writing, but also as a partner in creation and recreation of knowledge. Moreover, for the non-native writer or for second language learners, computer technology becomes an especially valuable partner, as it promotes a simple writing process that spurs the language learner to a higher level of performance in writing as well as in the creative construction process through which language develops. Studies like those of Beauvois (1998) examining the use of networking or computer-mediated communication for English writing skills have shown active learning through increased learner interaction. Sotillo's (2002) study shows the positive potential of the ubiquitous access to the language learning programs made available through wireless connectivity, Other studies include, positive attitudes towards individual features of developed programs such as interactivity and feedback (Bikowski and Kessler 2002), comprehension (Chen, Belkada, and Okamoto, 2004), and learner autonomy and responsibility of learning (Yan and Xiaoqing, 2009).

While most studies on use of technology in writing have been largely concerned with the use of one aspect of technology, there still remains a need to study the effectiveness of the varied aspects of technology incorporated into one single program. In other words, there is a need for the production and evaluation of a suitable program, where language teaching puts various aspects of new technologies to efficient use. The current study therefore, addresses this need with the integration of various pedagogical principles in language learning in the design of the technology-enabled language enhancement program.

The purpose of this study is to determine if technology-enabled language enhancement programs can be effective in developing the written communication skills of ESL learners at the tertiary level.

Moreover, in an earlier study, tasks based on writing for real needs were created which could prove effective in increasing the performance of the students. However, the study emphasized the need for graded performance-based assignments for students' improvement in writing skills (Greany, 2002). The current study, consequently, aims to address the issue of writing skills within the technology-enabled language learning program with performance-based assignments in aiding students' writing skills.

Moreover, the present study also investigates the usefulness of technology in enhancing the various components of writing such as unity and cohesion, logical arrangement of ideas in sentences, grammar and vocabulary, summary writing, and paragraph writing skills. Thus, the study is an evaluation of a program developed for students to work on to enhance their writing with the help of sophisticated e-learning technology.

1.8 Research questions

With need to address the research gap, the current study embarked upon getting answers to the following research questions:

a) Can the incorporation of technology in language learning programs be effective in enhancing written communication skills of ESL learners at the tertiary level?

b) Can the incorporation of technology in language learning programs be effective in enhancing various sub-skills within written communication of ESL learners at the tertiary level?

c) Can the incorporation of technology in language learning programs be effective in enhancing written communication of ESL learners equally for male participants and female participants at the tertiary level?

d) Can the incorporation of technology in language learning programs be effective in enhancing written communication of ESL learners equally across various academic disciplines at the tertiary level?

1.9 Statement of research problem

Effectiveness of technology-enabled language enhancement program to develop the written communication skills of ESL learners at tertiary level

1.10 Scope of the study

The study explores the effectiveness of technology-enabled language enhancement program for English as Second Language (ESL) students in written communication skills. The research study in this area provides students with utilization of technology as a tool in language enhancement with a specific focus on writing, thus giving ESL learners a global advantage in application of their language skills. With the incorporation of technology into language learning, the learning process becomes more contemporary in line with the Hong Kong government's "educational aims for Hong Kong students – English, IT, and a global perspective" (Lee et at. 2005).

The study also could be useful to ESL teachers and course developers as a guideline in course design and development for writing skills using technology. The research study is also envisaged to act as an initiative for modern trends in technology-based language teaching, thus, adding to the preparedness and competence of the ESL teachers. It is anticipated that will be an overall influence on the teaching-learning process at the tertiary level.

1.11 Hypotheses

The following null hypotheses guided the study:

a) There will be no significant difference between the **mean scores on the pre-test and post-test** of the students who underwent the technology-enabled language enhancement program to develop written communication skills.

b) There will be no significant differences **among the mean scores** on the pre-tests and post-tests of the students who underwent the technology-enabled language enhancement program to develop written communication skills in the **various components of written communication skills**.

1.12 Objectives

The objectives of this study were:

a) To find out the difference in achievement of the students who underwent the technology-enabled language enhancement program to develop written communication skills.

b) To verify the differences in achievement among the various components of written communication skills of the students who underwent the technology-enabled language enhancement program to develop written communication skills.

1.13 Research design and methodology

To investigate the effectiveness of the technology-enabled language enhancement program for written communication skills of ESL learners at the tertiary level, a research design which tested the given hypotheses in a controlled context such as an experiment was required. The study therefore incorporated the one group pre-test post-test experimental research design which was used to measure the written communication skills of the participants in the study. On one hand, the pre-test was administered at the

beginning of the experiment as a regulatory means to control prior differences among participants. On the other hand, the post-test was administered towards the end of the experiment to measure the effectiveness of the treatment, that is, the technology-enabled language enhancement program.

In addition, in order to evaluate the effectiveness of the technology-enabled language learning program, a program evaluation tool was adopted in the form of a questionnaire. A range of questions based on the literature available on the use of technology in learning were developed in the structured questionnaire as a means for evaluating the technology-enabled language enhancement program. The questionnaire covered items that evaluated various features of the program, such as *overall program enjoyment, accessibility, comprehension, time, resources enjoyment, interactivity and feedback, self-perception of language achievement, and attitudes towards technology*, thereby eliciting the opinions on the technology-enabled language enhancement program administered to the participants as part of the treatment.

1.14 Delimitation of the study

The generalization of information provided by this study will be limited to written communication skills of tertiary level students because intact classes were used for the research and thus, randomization of sample selection did not occur.

1.15 Scheme of chapters

The introductory chapter sets the contextual background of the current study in terms of the use of technology-enabled language enhancement with a focus on the Hong Kong context. In Chapter 2, the literature regarding the various language learning theories with respect to second language acquisition in relation to technology-enabled language learning is surveyed. Previous research in practice of technology-enabled language learning is also examined. Chapter 3 then describes the research design and methodological approach of the main study. Chapter 4 presents the data analysis and interpretation of the results of the study, firstly those related to the pre-test and post-test scores in terms of the performance of students' writing, and then, those pertaining to the attitudes of students' towards technology-enabled language enhancement program and the relationships between various features of the program. Chapter 5 attempts to provide an

explanation and discussion of the results, combining the findings of the study conducted to evaluate the effectiveness of the program through both the test scores and the questionnaire. The chapter thus, addresses the study's research questions within a pedagogical context with the wider implications of the study along with its overall achievements.

1.16 Conclusion

This chapter introduced the background and context of the current research study. The chapter then provided a socio-cultural context of the Hong Kong education system, followed by a background on the place of English in Hong Kong. After an understanding of the socio-cultural context and the place of English in Hong Kong, an explanation on the role of technology in the Hong Kong education system in general, and the use of technology at the tertiary level in particular, ensued. This was followed by instances of different technology being used for language learning at various tertiary institutions in Hong Kong. A description of the use of technology for language learning at Lingnan University was then specified. This set the rationale and purpose of the study. The statement of research, scope of the study, hypothesis, objectives, and research design and methodology, and limitations of the study were then presented. Finally, the scheme of chapters offered an overview of the entire research study.