CHAPTER I
INTRODUCTION

Globalization and the information-technology revolution demand that the learners of English as a second/foreign language develop a working knowledge of English to participate in the global communication. In addition, with the development of the Internet and the advancement of information and telecommunication technology, the world has become a knowledge-based community (Drucker, 2002) where the rate of information and knowledge development has accelerated and subsequently, the effective lifetime of knowledge is shortening (Tapscott, 1997).

This limited lifetime of knowledge necessitates the constant updating, expansion, and development of personal expertise. Little (2003: 216) predicted that "the new and rapidly expanding information systems are likely to have a profound effect on the way in which we communicate within and between societies and, by extension, on the range of skills foreign language learners need to develop." Not only has the information increased rapidly, but the importance of English language has also increased with the growth of international travel and communication. Consequently, English has become a lingua franca, the common language used for either face-to-face or online international communication by the majority of the world population (www.internetworldstats.com, 2006). Trim (1988: 3) argued that "no school, or even university, can provide its pupils with all the knowledge and the skills they will need in their active adult lives. It is more important for a young person to have an understanding of himself or herself, an awareness of the environment and its workings, and to have learned how to think and how to learn".

Thus, the primary goal of English as a foreign language (EFL) education in the 21st century is to create a learning environment in which learners autonomously use English language to interact with others and further develop their communicative competence for real life use. From recent research (Cotterall, 1995, 1999; Fowler, 1997; Little, 1997; Wenden, 1998; Zhang, 2004; Dam & Legenhausen, 1996), it is indisputable that language learning is enhanced when the student has a large measure of control over the goals, content and process of language learning. It was also found that the best learning results are achieved if learners work with authentic materials used in the context of real-world-based situations or at least simulations and thus are supported by authentic tasks. Since learner is considered the key of the development, a number of learner-centered approaches have been introduced to EFL education

along with content-based or task-based instruction as well as provision of a higher level of participation in classes. As well, a cooperative learning approach where "group learning activities are organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others" (Kagen, 1992: 8) has been proposed. Accordingly, foreign language instruction goes beyond just providing comprehensible input; it also creates socially interactive contexts in which learners actively engaged themselves in the learning process. Learning is then viewed as processes embedded in cognitive and social contexts (Kinginger, 2002).

1.1 Background of the study

The new paradigms of EFL learning in 21st century inform the recent theory of autonomy in language learning, which has relatively changed from the belief of learners' development towards individualization to a development of skills for "collective scaffolding" (Donato, 1994) in cooperative and collaborative learning activities. Researchers on autonomy were aware that in order to develop autonomy, learners needed to be freed from the direction and control of others. Little (1991: 13) proposes a learner autonomy that takes its starting point in "the learner's perceived needs, his interest and his learning purpose." However, learners who chose, or were forced by circumstances, to study languages in isolation from teachers and other learners, would not necessarily develop autonomy. This belief is one of the most challenging developments in the theory of autonomy in the 1990s and leads to the idea that autonomy implies interdependence. Kohonen (1992) has argued the point forcefully that autonomy includes the notion of interdependence, because personal decisions are necessarily made with respect to social and moral norms. Autonomous learners are expected to be responsible for their own conduct in the social context and must be able to cooperate with others and solve conflicts in constructive ways. Collaborative decision making within co-operative learning groups is a key feature of Kohonen's experiential model for the development of autonomy. Little (1996) also posits that collaboration is essential to the development of autonomy as a psychological capacity. He proposes that the development of capacity for reflection and analysis, central to the development of learner autonomy, depends on the development of internalization of a capacity to participate fully and critically in social

interactions. In a learning context, autonomy is thus an umbrella term covering both "independence" and "interdependence" as opposed to "dependence," which implies excessive reliance on the direction of teachers or teaching materials (Benson, 2001). This clear explanation supports the changing scenario of foreign language learning in the 21st century.

Furthermore, several researchers (Benson, 1997; Jones, 1995; Littlewood, 1999; White, 1995) have investigated whether cultural value system will allow autonomy to be introduced in EFL in Asian contexts where students have such little opportunity, individually or as a group, to identify and set their own learning goals, to engaged in free interactive-group learning programs and to develop their own repertoire of learning strategies. To create a form of autonomy that will enable teachers to work within cultural constraints in East Asia, Littlewood (1999) proposed a "broader framework (for autonomy) within which the perceived needs of different kinds of learners—both inside and beyond East Asia—can be accommodated" (p. 74). He places autonomy in a group context and distinguishes between *proactive* autonomy (where learners take charge of their own learning) and *reactive* autonomy (where learners organize their resources autonomously once the direction is given).

In recent research and articles on the aforementioned ideas of the new EFL learning approaches and concepts of EFL learner autonomy, Vygotsky-inspired social constructivist theory are widely discussed due to influence and support the theory provides. In his work on developmental psychology, Vygotsky assumed that learning begins from the starting point of the child's existing knowledge and experience and develops through social interaction. This assumption was made explicit in Vygotsky's (1978: 86) idea of the *zone of proximal development*, which he defined as: "the distance between what learners can achieve by themselves and what they can achieve with assistance from others." The skills that the individual has already mastered constitute his or her actual level. The skills that the individual can perform when assisted by a more capable person or some other means of mediation constitute the potential level. Thus, learnt skills provide a basis for the performance of new skills. When these skills in turn become autonomous and stable, a new zone can be created to make possible the acquisition of still further skills.
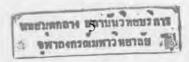
From a social constructivist perspective, language learning is about the understanding of learners themselves as agents whose conditions of learning affect the learning outcome (Lantolf, 2000). The degree of interaction and involvement in the

shared activity depends on learners' motives, belief, and attitudes, and their investment in the learning situation. Social interaction is more than the action of one person delivering information to another; rather, it shapes and constructs learning through collaborative effort and scaffolding in expert and novice interaction (Kinginger, 2002). Through socialization, learners use the target language as a cognitive tool to perform and assist each other in a shared activity (Lantolf, 2000). Importantly, collaborative scaffolding allows learners to expand their linguistic and cognitive skills to engage in problem-solving situations (e.g., negotiation of meaning and form) and knowledge building (Swain, 2000). Donato (1988) found that students who worked collectively on preparing for a role-play task produced learning outcomes for the group and the individual greater than those of their loosely knit counterparts. Storch (2001) also found that in pair work tasks, only those pairs that exhibited a collaborative orientation to their work resulted in co-construction of new knowledge, peer assistance, and the learning of grammatical form and new vocabulary. Ohta (2000) also argues that the nature of the task and the goals of the learners also affect how participants interact with each other. Tasks should expose students to a wide range of structures appropriate to their level in order to make both meaning and form connections (Skehan, 1998). In sum, learners' linguistic, cognitive, and affective domains play a significant role in the social constructivist perspective of language learning because they affect the degree and the quality of social interaction.

1.2 Rationale for the research and development of Hybrid Network Technology-Enhanced Language Learning (HybridNTELL) model

In most EFL contexts (e.g., Thailand, Japan, China, Korea, Indonesia, Saudi Arabia, Israel, Hungary, to name but a few), learners have limited exposure to English language, classes are large with approximately 40-50 students, language learning is examination-oriented, and English is not necessary for daily communication (Braine, 2005; Phadvibulya, 2004). An implementation of social constructivist theory (SCT) in language learning is considered a great paradigm shift and requires careful planning. The limitations of EFL context mentioned above persuade some educators to incorporate computer-mediated communication (CMC) and web-based learning to facilitate SCT-based EFL learning environment.

The Internet offers an effective means of opening new horizons for foreign language learning and teaching. Computer-mediated communication (CMC) through

both asynchronous exchange (e.g., emails and discussion boards) and synchronous interaction in real time (e.g., chat rooms, and video conferences) affords unique learning conditions for FL learners to expand the use of the target language and thus develop their communicative language skills (see, e.g., Abrams, 2003; Blake, 2000; Lee, 2002; Pellettieri, 2000). Previous studies have documented a number of benefits that learners have gained by using network technologies (e.g., Darhower, 2002; Lee, 2002, 2004; Sengupta, 2001; Smith, 2003; Warschauer, 2000). Network-based learning creates a friendly and low-anxiety learning environment that allows "all" rather than "some" students to participate (e.g., Kern, 1995; Lee, 2002) and encourages affective support among peers to increase students' motivation toward L2 learning (Lee, 2003; Weasenforth, Biesenbach-Lucas, & Meloni, 2002). As opposed to the traditional classroom setting in which one finds a teacher-driven approach, CMC promotes greater interaction and reduces teacher talk, while the learners equally share turns in participation (e.g., Lee, 2004; Sulivan & Pratt, 1996). Through network collaboration, learners extend their communicative abilities; they employ a wide range of discourse structures and modification devices to interact with others (e.g., Kern & Warschauer, 2000; Smith, 2003; Sotillo, 2000; Toyoda & Harrison, 2002; Tudini, 2003). As the result of negotiated interaction, learners improve their grammatical competence (Lee, 2002; Pellettieri, 2000) and written and oral communication skills (e.g., Abrams, 2003; Blake, 2000; Lee, 2002; Payne & Whitney, 2002).

From the perspective of autonomy, the most significant Internet-based activities involve e-mail, on-line discussion and web authoring (Benson, 2001). Internet technologies open up opportunities for interaction among learners, between learners and target language users, and between learners and teachers that could otherwise be difficult or impossible to achieve in the classroom. The Internet also appears to facilitate learner control over interaction. Warschauer et al. (1996) cite a number of studies suggesting that use of the CMC tools in language learning lead to more student-initiated interactions, a social dynamic based on student-student collaboration, more student-centered discussion and a shift in authority from teacher to students. Text-manipulation and CMC applications also offer greater opportunities for the development of control over learning content.

Given the above mentioned benefits that Internet technology has afforded SCT-based EFL learning and learner autonomy development, more and more

instructional models and guidelines for online language learning have been created. Yet, relatively little attention has been placed on two big issues that are significant to the area of research and implementation. First, there are a limited number of investigations into the effectiveness of the integration of the Internet technology and a sufficient and valid description of the delivery process grounded upon a well-supportive theory-based pedagogical framework. Relevant literature review and meta-analyses by Zhao (2003), Felix (2005) and Hubbard (2005) all suggested that existing literature on the effectiveness of technology uses in language education is very limited. There is a lack of "systematic, well-designed empirical evaluative studies of the effects of technology uses in language education" (Zhao, 2003). Felix (2005) concluded from her "Analyzing recent CALL[1] effectiveness research" that a perfect research design for studying the effectiveness of ICT on language learning remains elusive. Second, although researchers are increasingly beginning to understand that there is an intimate relationship between autonomy and effective learning, this relationship has only been explored at the level of theory and lacks substantial empirical support. According to Benson (2001), we still lack global measures that allow us to judge whether learners have become more autonomous. He suggests that research should focus upon directly and indirectly observable behaviors associated with control, for example, the ability to produce more effective learning plans, participate more in learning processes, reflect more deeply on their learning and so on.

1.3 Objectives of the study

This current project on HybridNTELL model development is grounded upon social constructivist theory as the model design and research framework. It aims to provide a well-established theory-driven empirical-based model with the following objectives in the process of the development and evaluation:

1.3.1   To study the social constructivist approach to foreign language learning as a basis for creating a theoretical framework guiding HybridNTELL model design

1.3.2   To design and develop HybridNTELL model in the context of application based on social constructivist theory as the theoretical framework

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[1] CALL = Computer-assisted language learning which has been defined as "the search for and study of applications on the computer in language teaching and learning" (Levy, 1997: 1)

1.3.3 To evaluate effectiveness of HybridNTELL model based on the social constructivist theoretical framework guiding its design which is based on four task types ranging on different degrees of autonomy

The first two objectives were formed to generate a HybridNTELL model based on social constructivist approach to foreign language learning. The third objective to evaluate the model leads to the following four research questions.

1.4 Research questions

In implementing and evaluating the Hybrid NTELL Model based on social constructivist theory for enhancing EFL learner autonomy and language development, four specific questions addressed in this research are:

1.4.1 To what extent do students with different English proficiency levels demonstrate different degree of autonomy during a language learning course?

1.4.2 To what extent do students exhibit different degree of autonomy in four different types of tasks?

1.4.3 Is there any interaction effect between students' English proficiency level and task types on their degree of autonomy?

1.4.4 How does the EFL students' development of autonomy in Hybrid NTELL model enhance their language development?

1.5 Statements of Hypotheses

Based on the literature, researchers claimed that there is an intimate relationship between degree of autonomy and effective learning. Thus, the students with higher proficiency levels are assumed to possess more effect learning than those with lower proficiency levels. The hypotheses were produced based on the relationship as follows:

1.5.1 Degrees of autonomy of students' with different English proficiency levels are significantly different.

1.5.2 Students' degrees of autonomy exhibited in four different types of tasks: reactive-interdependent, reactive-independent, proactive-interdependent, and proactive-independent tasks are significantly different.

1.5.3 There is no interaction effect between learners' English proficiency levels and task types on students' degree of autonomy. Students' with high

proficiency level perform well in every task while those with limited proficiency level demonstrated limited level of performance in those tasks.

1.5.4 Students with higher level of proficiency develop their language significantly with better progress than those with lower level of proficiency.

To investigate how HybridNTELL mediates language use and learning, this study utilized both qualitative and quantitative data to describe and explain the process of model development and learning outcomes. Such various procedures as standardized test, achievement test, classroom observation, system interaction logs, sets of questionnaires to ensure the integrity of the data collected to be analyzed.

1.6 Scope of the HybridNTELL model study

An immediate goal of HybridNTELL project is to serve a technology-rich EFL learning environment designed from the perspective of Vygotsky-inspired social constructivist theory. The scope of the current study was framed within the specific context and group of participants.

The three-year process of model development was carried out within a foundation English course for first year undergraduate students in Chulalongkorn University named *Experiential English* course (Office of Academic Affairs, Chulalongkorn University, 2005). Driven by the growing demand of the 21st century and the paradigm shift in education, the university has recently reconstructed their curriculum for the foundation English course which is compulsory for all first year undergraduate students in all disciplines excluding those with English major.

Due to an increase in enrollment and the limited number of English teachers, classes are filled with up to 45-60 students which exceed the ideal class size for foreign language instruction claimed to be 19 (Locastro 1989). However, the instructional model, designed through the perspective of Vygotsky-inspired social constructivist theory by Dr. Sudaporn Luksaneeyanawin, the Experiential English project leader, has turned the crisis of large class to create a new opportunities to prepare the students with skills in English language learning and language use to live and work in the 21st century global knowledge-based communities. The notion of knowledge-based communities highlights many Vygotskyan concepts addressed centuries ago among which the idea of learning through social interactions is the

focus. The treatment group comprised of 143 EFL university students selected from the whole population of 2,500 students.

This report describes the development process of the HybridNTELL model that serves the foundation English course and the evaluation of the model based on students' demonstration and development of autonomy, their language development and perception towards the HybridNTELL model. After the design of HybridNTELL model was completed, it was piloted with a group of students throughout one semester. Then, the model was modified before it was implemented with another group of students throughout one semester in the next academic year.

The model was piloted and implemented in the first semester of the academic year when the first year students take the first foundation English course. The first seven weeks was devoted for learner preparation leaving the other nine weeks for model experimentation.

Since the current research and development of HybridNTELL model aims at future implementation and validation, the key variables framing the scope of the study must be described in the working definition of terms.

1.7 Definition of terms

The research and development of HybridNTELL model was framed within the three major areas of study: learner autonomy, network technology for learning, and social constructivist theory with a shared specific objective, that is, to improve EFL learners' development of autonomy. Some variables in the HybridNTELL model research and development might be referred to differently in other contexts. To create a good understanding of methodology and outcome, the following key variables must be defined. They are 'HybridNTELL', 'social constructivist theory', 'EFL learner autonomy', and 'learners' development.'

1.7.1 HybridNTELL

HybridNTELL is the acronym for Hybrid Network Technology-Enhanced Language Learning. The term *hybrid* learning environment is widely used in CALL studies (e.g. Chenoweth, Meskill & Anthony, 2004; Liu, 2003; Scida & Saury, 2006; Ushida & Murday, 2006) to describe courses in which instruction takes place in a traditional classroom setting augmented by network technology-based activities which can replace classroom seat time. In the flow of instruction, the only two modes of

interaction: synchronous face-to-face classroom interaction and asynchronous online interaction are used equally and complementarily as the platforms for communication.

In this study, hybrid learning differs from blended learning in that learning takes place on the only two platforms where learners jointly construct knowledge for the community and learn from that; not on "an integrated program of multiple media type" (Bersin & Associates, 2003) or "a combination of an online software for independent work and face-to-face class" (Banados, 2006) which implies two or more platforms of interaction not specifically.

Network technology-enhanced language learning (NTELL) is considered one kind of CALL that relies on any type of networked devices (e.g. computers, cell phones, PDAs, iPhone, etc.) for communication not restricted to only a computer (Phadvibulya, 2005). The NTELL in this study might be thought of as a computer-mediated communication (CMC) platform since only computers were used as only device. However, this HybridNTELL model is aimed to be applicable to some other types of networked learning platforms.

The HybridNTELL integrates a learning management system (LMS) and such featured activities as electronic discussion board, wiki[2], online quizzes and external weblogs[3] anchored to the class website. The online asynchronous platform is used as a complement to synchronous face-to-face classroom conferencing. The electronic forum, wiki and weblogs are Computer-Mediated Communication (CMC) used as a learning tool based on social constructivist approach to language learning for EFL learner to achieve their communicative goal by "learning how to mean" (Halliday, 1975) in English.

1.7.2 Social constructivism

Social constructivism approach is rooted from the work of Vygotsky (1978) and explored by many researchers (Adair-Hauck & Donato, 1994; Aljaafreh & Lantolf, 1994; Anton & DiCamilla, 1998; Coughlin & Duff, 1996; Warschauer, 1997). Some researchers in language education fields might refer to Vygotsky's theory as *sociocultural theory* or *constructionism*. In this current study the Vygotsky-inspired theory of learning is called *social constructivism*. Social constructivists believe that

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[2] Wiki enables participants to work together on a project using web pages to add, expand and change the content. Old versions are never deleted and can be restored so that learners can trace back their process of learning as an individual or a group
[3] Weblogs are now burgeoning as short-form journals that reference each other and invite commentaries

learning takes place in a social environment and is facilitated by dialogue or some other kinds of mediation. During the exchange of ideas within their *Zone of Proximal Development* or ZPD (Vygotsky, 1978), each individual interlocutor is able to internalize the new jointly construct knowledge, both content knowledge and linguistic ones (e.g. vocabulary, grammar). The main idea of Vygotsky-inspired social constructivist theory used in the HybridNTELL model research and development is the role of language and thought, ZPD and mediation which correspond with the concept of EFL learner autonomy.

1.7.3 EFL Learner autonomy

EFL learner autonomy is defined in HybridNTELL model research and development as 'an ability to control and direct one's own language learning reactively and proactively through independent and/or interdependent manner to become a more proficient English language learner/user regarding one's own needs.' The perspective of the aforementioned concept of EFL learner autonomy discussed through social constructivist theory offers four interactive dimensions of EFL learner autonomy in HybridNTELL model. The four dimensions are assumed to require different degrees of autonomy from the least to the most as follows: reactive-interdependence, reactive-independence, proactive-interdependence, and proactive-independence (see Chapter III).

1.7.4 Learners' development

This study aims to investigate learners' development from different sources of their learning outcomes. Four important sources of examination can be used to study the learners' development. They are learners' English proficiency, curriculum-based achievement, holistic task performance examination, and objective language examination.

English proficiency was examined by Chulalongkorn University Test of English Proficiency (CU-TEP), a standardized test of English proficiency produced by the Academic Test Center of Chulalongkorn University. The two equivalent sets of tests were administered before the beginning and after the end of the course. The scores from the CU-TEP were concurrent with the Test of English as a Foreign Language (TOEFL) since the two tests were based on the same construct and TOEFL scoring system is widely referred to.

Curriculum-based achievement was measured from the final test administered campus-wide for non-English major students who take Experiential

English as a compulsory Foundation English course. The construct of the test was based on the knowledge and skills the students developed throughout the course.

Holistic task performance was examined through the students' class performance. Criteria for assessment based on social constructivist theory measure the learners' ZPD, degrees of mediation and their development of language and thought. The learners' holistic task performance examination reflects their *degrees of autonomy* based on the four dimensions (see 1.7.3). The development of autonomy was tracked through the first performance to the last performance students demonstrated during the course.

Objective language examination was designed based on the developmental index proposed by Wolfe-Quintero, Inagaki and Kim (1998) and their ability to control the use of curriculum-based language focus. The developmental index includes a set of objective scales measuring improvement of fluency, accuracy and complexity of the students' language use in task performance.

1.8 Significant of the study

This research and development project of HybridNTELL model aims to put a step forward to prepare the EFL learners in higher education for the global future demand. As well, it aims at drawing attention to issues concerning process of learning model development and delivery that should be addressed in research for application purpose. In this report, an insightful description of model design process grounded on social constructivist theory as the framework is provided. The procedure of implementation and evaluation was described beginning from the pilot stage, modification and revised HybridNTELL model delivery. Then, an analysis of the model key variables aims to offer a clearer view of learning processes observed in the HybridNTELL environment.

The attempt to test the proposal framework for evaluating HybridNTELL model with empirical evidence resulted in a well-established theory-driven empirical-based model that provides empirical evidence on students' performance, development, achievement towards autonomy and perceptions as well as variables affecting the growth. As well, the model offers guideline for institutional practices and basis for future research.