

Dissertation in
Master of Arts in Applied Linguistics

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**A Case Study on the Use of Asynchronous Computer Mediated
Communication using Bulletin Board Application Tool as Pre-Task and
Post-Task Activities to Improve Speaking and Writing Skills.**

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2004

November 9, 2004

Chapter 1

INTRODUCTION

1.1 Introduction

This study will examine to what extent participation in asynchronous computer mediated communication (CMC), using the bulletin board application tool as pre- and post-task activities, will help a group of 20-25 third semester English language students improve their speaking and writing skills. This study is inspired by the advantages of computer mediated communication (CMC), which will be reviewed in Chapter 2. This study will provide literature for those who are interested in finding out how to use asynchronous CMC to teach English, especially in the Indonesian EFL context. This study will also provide insights into how asynchronous CMC helps to facilitate second language acquisition in students. The results of this study will hopefully help shed a light on how the Indonesian EFL students use the bulletin board application tool in their learning English as a foreign language, and help EFL teachers use asynchronous CMC, especially bulletin board application tool, in their class.

1.2 Background to the field

The characteristics of the English language today have made it an international language. It is a language which has a large number of native speakers and “it is central to a growing global economy, the major language of a developing mass culture, and a language [which is] learned by more and more individuals as an additional language”(McKay, 2002, p. 15). English has become the language of international

communication, and acquiring it has become essential for accessing many discourses at a global level in international relations, politics, education, and culture (McKay, 2002).

Considering the importance of English as an international language, the Indonesian government has decided that students should be required to study English in school. English is a compulsory subject taught from junior high school until university, and some English Departments, including that of Sanata Darma University, have regulated that students should graduate with a minimum TOEFL score of 550 (Kuswandono, 2004, personal communication). This requirement is based on the premise that knowledge of the English language will provide greater access to job opportunities and higher education.

One of the tools that language teachers can use to help their students acquire English is the Internet. The Internet is one of the most significant things that human beings have ever created (Naughton, 1999). It has had significant influences on language, which as Crystal (2001) argues, are the same or even greater than those of printing and broadcasting technology. The Internet is, as Crystal puts it, "a linguistic revolution" (Crystal, 2001, p. viii). Many studies (e.g., Abrams, 2003; Appel & Gilabert, 2002; Beatty & Nunan, 2004; Beauvois, 1992, 1995, 1997; Herring, 1996b; Kamhi-Stein, 2000; Van Handle & Corl, 1997; Warschauer & Kern, 2000) have demonstrated that the Internet, in the form of e-mail, chatgroups, virtual worlds, and the World Wide Web (Crystal, 2001), has advantages to the teaching of language, and especially in this case, the English language.

Despite its popularity and advantages for language teaching, not many teachers have used the Internet in the Indonesian EFL context. Though it is quite popular in Indonesia

(in 2000, I found more than 5 internet cafés within 500 m² of the area where I live), the fact that the Internet is still considered expensive by many, and the Internet connectivity is still poor, are probably major factors as to why the Internet has not been optimally used for teaching English for Indonesian EFL students. However, considering the advantages of the Internet, especially CMC which will be reviewed in Chapter 2 and its potential usefulness for teaching English in Indonesian context, this study is therefore worth pursuing. In fact, the study's focus is on asynchronous CMC, the most realistic form of CMC with respect to the poor internet connectivity in Indonesia.

1.3 The Study

1.3.1 Background to the Study

Research has shown that CMC has the potential to promote students' autonomy (Schwienhorst, 2003; Ushioda, 2000; Warschauer, Turbee, & Roberts, 1996) and equality (Warschauer, 1996), develop students' learning (Kroonenberg, 1994/1995), critical thinking (Warschauer et al., 1996) and reflective learning skills (Lamy & Goodfellow, 1999a). It also increases their motivation (Appel & Gilabert, 2002; Ushioda, 2000), and creates a conducive environment for collaboration, interaction, and negotiation for meaning (Abrams, 2001; Biesenbach-Lucas, 2003; Gutierrez, 2003; Kotter, 2003; Lee, 2004; Pena-Shaff & Nicholls, 2004). Promotion of cultural exchanges is another significant advantage of CMC (Liaw & Johnson, 2001; O'Dowd, 2003; Van Handle & Corl, 1997).

Several studies have been conducted to investigate the effect of CMC on speaking (e.g., Abrams, 2003; Beauvois, 1997; Kroonenberg, 1994/1995; Payne & Whitney, 2002;

Van Handle & Corl, 1997) and writing skills (e.g., Beauvois, 1997; Biesenbach-Lucas & Weasenforth, 2001; Kroonenberg, 1994/1995; Lan, 2004; Van Handle & Corl, 1997; Warschauer, 1996). However, there has been no study into the effect of asynchronous CMC as pre- and post-task activities on speaking and writing skills, especially in the Indonesian EFL context. The present study will therefore attempt to conduct action research to investigate the effect of asynchronous CMC, using a bulletin board application tool as pre- and post-task activities, on Indonesian EFL students' speaking and writing skills.

1.3.2 The necessity and usefulness of this study

There are currently no studies or literature available that investigate the use of asynchronous CMC, or even the use of technology and the Internet, to teach English to Indonesian students. Undertaking such a study will provide valuable literature for teachers who are eager and motivated to apply this new technology in their classrooms.

This study will provide useful insights into how best to use asynchronous CMC, especially a bulletin board application tool, to teach English to Indonesian EFL students; and on how a bulletin board helps facilitate second language acquisition. It will also shed light on how students perceive the use of the bulletin board application tool. Teachers who are interested in applying the bulletin board in their classroom can benefit from such input and feedback from students, as they can use it to modify and change the application according to their own teaching contexts.

1.4 Research Questions

There are three questions that this study will attempt to answer:

1. To what extent will participation in asynchronous CMC using a bulletin board application tool as pre- and post-task activities help one group of 20-25 third semester students improve their English speaking skills?
2. To what extent will participation in asynchronous CMC using a bulletin board application tool as pre- and post-task activities help the same group as above improve their English writing skills?
3. What will the students' impressions be regarding the use of the bulletin board application tool?

1.5 Summary

This action research study will aim to determine the extent to which the bulletin board application tool will help Indonesian EFL students improve their English speaking and writing skills. The results of this study will have benefits for teachers who are eager to apply this new technology to help their students learn English, but have as yet been unable to find the appropriate literature to guide their use. This study will be the first to try to provide insights on how to use the bulletin board application tool to help Indonesian students learn English, and on how this tool helps facilitate language acquisition. The next chapter will review some of the related previous literature that provides the background for this study.

Chapter 2

REVIEW OF PREVIOUS LITERATURE

2.1 Introduction

This chapter begins with a review of Long's (1996) Interaction Hypothesis, and related second language acquisition theories. The reasons why oral language production and oral language acquisition have become the main research agenda in second language acquisition (see Bygate, 1998) at the expense of literacy (reading and writing) (Harklau, 2002) will then be discussed. This has tended to be the case, especially in instructed (classroom) second language acquisition, despite the fact that reading and writing are as powerful a means of linguistic input, output, and interaction in second language acquisition as is speaking (Harklau, 2002). Task-based instruction and focus on form, two major concepts in second language acquisition that are motivated by Long's Interaction Hypothesis, will then be discussed. The definition, nature, and procedures for conducting action research will be examined, and the use of its principles in this study will be justified. A discussion of CMC will also be undertaken, concentrating on asynchronous CMC, since this area is the focus of the current study.

2.2 Introduction to Second Language Acquisition (SLA) Theory

According to the SLA Interaction Hypothesis (Long, 1996), negotiation for meaning, during which the learners' developing L2 processing capacity, and environment variables interact resulting in input comprehension, is necessary for the process of language acquisition (see also Pica, 1994). Long (1996) argues that during negotiation for meaning, learning will be supported in those environments where learners can depend on

assistance, in the form of interactional adjustments such as comprehension checks and clarification requests, from conversational partners. Long asserts that in the Interaction Hypothesis

it is proposed that environmental contributions to acquisition are mediated by selective attention and the learners' developing processing capacity, and these resources are brought together most usefully, although not exclusively, during *negotiation of meaning* [italics original]. Negative feedback obtained during negotiation work or elsewhere may be facilitative of L2 development, at least for vocabulary, morphology, and language-specific syntax, and essential for learning certain specifiable L1-L2 contrasts. (p. 414)

This means that through negotiation work, a learner's attentional resources may be oriented to (1) a particular difference between what they perceive about the second language and what is reality in comparison with the target language, or (2) an area of the second language of which they have little or no information (Gass & Selinker, 2001). Negotiation of meaning, which occurs during conversational interaction, therefore serves both as a forum for practice of specific language features, and as the basis for the development of language.

On its own, however, input comprehension in negotiation for meaning is not enough for language acquisition, and learner output is also necessary (Swain, 1985; Swain & Lapkin, 1995, see also Gass & Selinker, 2001). Swain (1985) argues that learners in their interaction for meaning negotiation are pushed in their production of language in order to make themselves understood. In doing so, they might modify previous utterances or try out ones that they had not used before. Comprehensible output, therefore, pushes learners

“toward the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately” (Swain, 1985, p. 249). Gass & Selinker (2001, p. 278) suggest four possible mechanisms through which comprehensible output may help learners in second language acquisition: (1) as a medium for hypothesis testing; (2) by providing feedback for the verification of the hypothesis; (3) by developing automaticity in interlanguage production; and (4) by forcing a shift from meaning-based processing of the second language to a more syntactic mode. These four mechanisms suggest that comprehensible output is important for language acquisition, especially in the development of syntax and morphology.

Based on findings from immersion acquisition, several authors have argued that providing learners with comprehensible input, conversational interactions, and opportunities to make themselves understood in their language production is not enough on its own for language acquisition (Doughty & Williams, 1998; Long & Robinson, 1998). There is still a need to focus on form, that is, to focus on the structural or syntactic dimensions of language. Therefore, within a communicative approach, “methods need to be developed and introduced such that communicativeness is not compromised, while at the same time, form is brought into focus” (Skehan, 2003a, p. 392). This focus on form will prevent learners to learn only about language and encourage them to learn how to use it.

As suggested by Egbert & Hanson-Smith (1999) and Gutierrez (Gutierrez, 2003), and demonstrated by many researchers (e.g., Kitade, 2000; Lee, 2002; Ortega, 1997; Salaberry, 1996; Smith, 2004; Sotillo, 2000), this study is based on these current views of second language acquisition. Next, I would like to discuss more second language

acquisition theories on speaking and writing before I discuss task-based instruction, the major implementation of focus on form concepts (Skehan, 2003a).

2.2.1 Second Language Acquisition Theories on Speaking

The acquisition of spoken language and oral language production have become the main research agendas in second language acquisition since the 1970's (Bygate, 1998). Since then several theories have emerged regarding the acquisition of spoken language and oral language production. Hatch (1978) argued that in second language acquisition "one learns how to do conversation, one learns how to interact verbally, and out of this interaction syntactic structures are developed" (p. 404). Hatch's examination suggests that the second language (i.e. the spoken language) is learned through conversation. Hatch then further argues that syntactic structures are developed not because of "some magic acquisition device which operates automatically on input" (p. 405) but because the learners carry on conversations and interact verbally. Hatch disagrees with the innatist perspective, which suggests that humans have a Language Acquisition Device (see Krashen, 1982), that is, an innate mental structure capable of handling L1 and L2 acquisition.

Krashen's (Krashen, 1982) Monitor Hypothesis, with its Input Hypothesis as a main theory, also focuses on spoken language. Krashen argues that second languages are acquired by receiving comprehensible input that is slightly ahead of the learners' current state of grammatical knowledge. Krashen also states that speaking is the result of acquisition, not the cause of it, and speech will emerge as a result of building competence through comprehensible input. Provided that there is enough comprehensible input, the

necessary syntactic structure is automatically provided, and therefore there is no need for classroom teachers to teach the next structure along the natural order. Their job is just to make sure that learners receive comprehensible input (Gass & Selinker, 2001).

Long's (1996) Interaction Hypothesis argues that learners learn L2 through conversation for negotiation of meaning, where learners receive conversational partners assistance. Focus on form and task-based instruction, the two latest concepts in second language acquisition motivated by the Interaction Hypothesis (Long & Robinson, 1998) are also focused on oral language production (as discussed above).

Studies motivated by the above theories have attempted to better understand the input and conversational interaction that learners are exposed to during L2 instructions (Chapelle, 1997). Data analysis in these studies mainly focuses on spoken language input, interaction, task structure and negotiation (Harklau, 2002). That is, these studies only pay attention to how students learn a second language through speaking, which is one of the focuses of this study, while L2 learning through writing has been neglected. This study therefore will add to the already available literature insights on how learners learn L2 through speaking. However, oral language production and acquisition are not the only main focuses of this study. This study will also attempt to find out how learners learn L2 through writing, which so far has been neglected. The next section will examine why L2 learning through writing has been neglected, and examine the need to know not only how learners learn to write in a second language, but more importantly how learners learn L2 through writing.

2.2.2 Second Language Acquisition Theories on Writing

Historically there has been a lack of attention given to the role of writing in classroom taught language acquisition, and Harklau (2002) argues that this is in part the result of the historical development of the second language acquisition field. The development of this field can be traced back to one of its most influential works, Bloomfield's *Language* (1935), which elaborately describes the behaviorism perspective on language.

According to Bloomfield (1935), language is speech rather than writing, in fact "writing is not a language, but merely a way of recording language by means of visible marks" (p. 21). Speech, he further argued, is a precondition for writing. He based his arguments on the facts that (a) normal children learn to speak before they learn to write and (b) although all societies have oral languages, few societies have written language (Gass & Selinker, 2001). These perspectives, as Harklau (2002) puts it, "have worked to privilege spoken language as the primary or default language modality" (p. 333).

Harklau (2002), however, argues that literacy (reading and writing) plays a significant role in classroom second language learning, and therefore second language acquisition research needs to focus on how learners learn L2 through reading and writing. Reading and writing, similar to speaking, are "powerful means of linguistic input, output, and interaction, albeit lacking the immediacy of face-to-face communication" (p. 334). Their powerfulness is becoming more prominent with recent technological advancement, and it has become more common to conduct discussions, negotiations, or collaborations through electronic communication, especially CMC. Learners' interaction in CMC can therefore provide rich and useful insights into how writing helps L2 learning. This study therefore will aim to provide insights into not only how learners learn to write in L2, but also on

how they learn L2 through writing. In the following section, the task-based instruction which is the major application of focus on form concepts, will be discussed.

2.3 Introduction to Task-Based Instruction

Task-based instruction is the major implementation of focus on form concepts (Skehan, 2003a). Skehan & Foster (1999) argue that task-based instruction will promote second language acquisition because “tasks push learners to use new structures to express their meaning [and] tasks require precision in expression of meaning” (p. 94). The term task here is defined as “the range of goal-oriented language learning activities in which learners participate in a classroom context” (Hoven, 1997, p. 43).

Task-based instruction involves three areas of performance that compete with one another for attentional resources - complexity/range, accuracy, and fluency (Skehan, 1996). Different task characteristics influence these performance areas, and the conditions under which tasks are transacted impact the language produced. They also represent different stages of the learning process, thus they have both performance and developmental aspects (Skehan, 2003a).

Skehan (2003a; 2003b) describes task characteristics as being either structured tasks, familiar information, outcomes requiring justifications, or interactive versus monologic tasks. Structured tasks are those that have a clear macrostructure, often involving a clear time sequence (Skehan & Foster, 1999), and tend to produce greater language fluency and accuracy. Familiar information tasks are “those where the information simply needs to be retrieved by the person doing the task, as opposed to requiring considerable cognitive operation on-line”. Familiar information tasks also produce greater fluency and

accuracy. Outcome requiring justification tasks “are illustrated by two decision making tasks that have been used” (Skehan, 2003a, p. 395), and produce greater language complexity. Monologic tasks tend to produce greater language fluency, but lower accuracy and complexity (Skehan, 2003a).

There have been several studies conducted to investigate the effects of pre-task planning and post-task activities on language acquisition. Research has shown that learners tend to produce greater complexity and fluency of language if they are given the opportunity to plan before tasks are transacted (Crookes, 1989; Mehnert, 1998; Ortega, 1999). However, it should be noted that Foster & Skehan (1999, as cited in Skehan, 2003a) argue that teacher involvement in learners’ planning is more effective than when learners plan by themselves or in a group. Several studies by Skehan & Foster (as cited in Skehan, 2003a) also show that as long as the intention is to focus learner attention on form, post-tasks activities, especially interactive ones, will also enhance learner accuracy.

Considering the benefits of CMC for input, interaction, and output in second language acquisition, review of the current views of second language acquisition in this study (including focus on form concepts and task-based instruction), is therefore relevant. It is necessary to integrate these current views in the research on the use of computers in language learning, as suggested by Egbert et al. (1999, see especially Egbert, Chao, & Hanson-Smith, 1999) and Gutierrez (2003). In the lights of these current views, this action research study focusing on the use of asynchronous CMC will be conducted. I will briefly discuss the definition and principles of action research in the following section.

2.4 Introduction to Action Research

Action research is the systematic collection and analysis of data through which teachers, as researchers, reflect on their teaching experiences (Wallace, 1998). The main function of action research is to facilitate the “reflective cycle” (p. 18), which provides teachers with an effective method to enhance professional development. Action research thus encompasses the areas of professional development (it provides a tool for reflection) and traditional research (it involves collecting and analyzing data). Action research is also problem-focused, and not concerned with trying to generalize the findings of the research to other contexts.

Elliot (1991) defines action research as “the study of a social situation with a view to improving the quality of action within it” (p. 69). He further argues that the purpose of action research is not to validate hypotheses based on “scientific tests of truth” (p. 69), but to examine how theories and hypotheses are validated through practice. Action research’s major focus is on “concrete and practical issues of immediate concern to particular social groups or communities” (Burns, 1999, p. 24). In the educational context, action research aims to improve the quality of educational practices, and the situations and conditions in which teachers and students work (Altrichter, Posch, & Somekh, 1993; Carr & Kemmis, 1986).

Generally, the starting point of action research is problems or issues arising out of the teacher’s professional practice (Burns, 1999; Elliot, 1991; Wallace, 1998), or discrepancies between expectations and actual practice (Altrichter et al., 1993). In addition, “focus on trying out good ideas for improvement or on the further development

of one's own strengths" (p. 35) is also a common starting point for action research (Altrichter et al., 1993).

When undertaking action research, many authors use the action research cycle, as proposed by Lewin (in Kemmis & McTaggart, 1988), which consisted of "analysis, fact-finding, conceptualization, planning, execution, more fact-finding or evaluation, and then a repetition of this whole circle of activities" (p. 29). This cycle has been elaborated by Elliot (1991, pp. 72-77), based on his own experiences, into seven activities (see also Altrichter et al., 1993; Burns, 1999; Edge, 2001; Kemmis & McTaggart, 1988; Macintyre, 2000; Wallace, 1998):

1. Identifying and clarifying the general idea.
2. Reconnaissance, which can be subdivided into:
 - a. Describing the facts of the situation.
 - b. Explaining the facts of the situation.
3. Constructing the general plan.
4. Developing the next action step(s).
5. Implementing the next action step(s).
6. Monitoring implementation and its effects.
7. Reconnaissance (explain any failure to implement and effects).

On completion of these seven stages the action researcher then revises their general ideas, based on their reflections, and starts on a second round of the cycle.

This study will use the action research cycle proposed by Elliot, and will also consider some of the studies in the collection of case studies edited by Edge (see Jackstadt & Muller-Hartmann, 2001; Melles, 2001; and Perkins, 2001, in Edge, 2001)

2.5 Introduction to Computer Mediated Communication

Salaberry (1999) in his commentary on Chappelle (1997) suggests that CMC should be added to the agenda of future research on computer assisted language learning (CALL), given the high level of interactivity that CMC generates. He further argues that critical research on CALL should incorporate the sociocultural perspective (Lantolf, 1994, 2000), because, as Warschauer (1997) contends, the sociocultural perspective “illuminates the role of social interaction in creating an environment to learn language, learn about language, and learn ‘through’ language. This perspective examines interaction within a broad social and cultural context” (p. 471). The sociocultural perspective is therefore more encompassing, considering the broad social and cultural context used by CMC to encourage collaborative learning in the language classroom (text-based and computer interaction, many-to-many communication, time- and place-independent, long distance exchanges, and hypermedia links) (Warschauer, 1997). It should be noted that Hoven (2005/6 forthcoming) suggests that classroom in this context refers to a learning environment, which may not necessarily be a classroom, but which includes learners in different times and spaces.

According to Warschauer *et al.* (1996), there are two types of CMC: asynchronous CMC (including e-mail, electronic discussion lists and bulletin boards), and synchronous CMC (real-time communication, such as Internet Relay Chat or MOOs). Hoven (2005/6 forthcoming), also adds a third category by dividing synchronous CMC into : synchronous CMC (real time communication with no delay, such as web casts), and delayed synchronous CMC (real time communication but delayed, because we have to hit the enter key in order to communicate, such as chat or MOOs). The focus of the present

study, however, will only be on asynchronous CMC. In this literature review therefore I will concentrate on some previous studies on the three forms of asynchronous CMC, namely electronic discussion list, e-mail, and bulletin board application tool. Before I review the studies in these three forms, I will first give a general overview of the advantages of asynchronous CMC.

According to Warschauer et al. (1996), the most popular form of CMC for language acquisition is asynchronous CMC, because it facilitates cross-cultural learning (Hertel, 2003; Kamhi-Stein, 1997; Lawrence, 2002; Liaw, 2003; Liaw & Johnson, 2001; O'Dowd, 2003; Torii-Williams, 2004; Van Handle & Corl, 1997; Woodin, 1997), promotes students' autonomy (Kamhi-Stein, 1997; Schwienhorst, 2003; Ushioda, 2000; Warschauer et al., 1996) and equality (Kamhi-Stein, 2000; Kroonenberg, 1994/1995; Warschauer et al., 1996), develops students' learning skills (Kamhi-Stein, 1997; Kroonenberg, 1994/1995) and critical thinking (Warschauer et al., 1996). Asynchronous CMC is also reported to increase students' motivation (Appel & Gilabert, 2002; Ushioda, 2000), create a conducive environment for collaboration, interaction, and negotiation of meaning (Abrams, 2001; Biesenbach-Lucas, 2003; Gutierrez, 2003; Kotter, 2003; Lee, 2004; Pena-Shaff & Nicholls, 2004).

The other advantage of asynchronous CMC is its delayed nature. This delayed nature provides opportunities for learners to reflect on the ideas of others as well as their own (Lamy & Goodfellow, 1999a; Liaw, 2003; Pena-Shaff & Nicholls, 2004; Schlagal, Trathen, & Blanton, 1996), which enables them to notice the formal features of the target language (Lamy & Goodfellow, 1999a), and produce syntactically complex language (Sotillo, 2000). The delayed nature of asynchronous CMC also gives students more time

to understand the class readings on a deeper level, and to contribute to each other's understanding (Biesenbach-Lucas, 2003). It is also found that asynchronous CMC discussion is more useful for task-oriented and topic discussion related to subject matters, while synchronous discussion is more useful for promoting social interaction (Im & Lee, 2003/2004).

As stated above, there are three forms of asynchronous CMC: electronic discussion list, e-mail, and bulletin board application tool. Studies on the use of electronic discussion list have focused generally on the influence of participants' identity on on-line participation and the learners' attitudes. Herring (1996a) argued that messages posted by female participants tended to be more helpful than those posted by male participants, which tended to be more critical of others' opinions. In a related study, Fishman (1999) found that female high school students were more reluctant to participate in public forum conversations such as Usenet newsgroups due to the rudeness and inflammatory attributes which public forum conversations tend to have. Some other studies have shown that students' attitudes towards electronic discussion lists are generally positive (Hammond, 2000; Hoshi, 2003; Son, 2002). They perceived electronic discussion lists as a means to exchange ideas, thoughts (Hoshi, 2003; Son, 2002) and personal information which creates a sense of community (Hammond, 2000) as well as a means to reflect on course readings (Hoshi, 2003).

Research on the use of e-mail in L2 classroom has demonstrated positive findings regarding to students' learning skills. Kroonenberg (1994/1995) in her study of the use of e-mail argues that e-mail activities can develop writing, reading comprehension, and

thinking skills. With follow-up classroom activities, she says, e-mail activities can also enhance speaking and listening skills. She states that

thoughts and arguments first composed in writing on e-mail give students reflection time prior to engaging in oral work. Whenever we have a class discussion based on e-mail entries, I find the quality of the argument is enhanced and thinking is more creative than without this kind of preparation. (p. 27)

Kroonenberg (1994/1995) was later supported by studies from Warschauer (1996).

Warschauer argues that:

the fact that electronically-produced texts can be saved for post-hoc review and analysis – suggest that electronic discussion might be used effectively as a prelude to oral discussion. Students could first generate many ideas and then look them over and discuss or debate them orally. (p. 22)

He then further argues, concerning the potential of CMC to increase writing ability, that “the formality and complexity of language in electronic discussion suggests that it might be an excellent medium for pre-writing work since it could serve as a bridge from spoken interaction to written composition” (p. 22). Lan (2004) in her study on the use of on-line chat as prewriting in the development of EFL learners’ writing skills also drew similar conclusions. She argued that on-line prewriting discussion helps students improve their writing skills in rhetoric, syntax, and communication. Payne & Whitney (2002) even contend that the oral proficiency gains of the experimental group in their study show that “a direct transfer of skills across modality from writing to speaking does occur” (p. 23).

Similar to Kroonenberg’s study, Van Handle & Corl (1997) investigated the effect on spoken and written German of e-mail exchanges between two intermediate level German

classes at Mount Holyoke and The Ohio State University. The students in each institution read the same texts and then sent their written reactions via e-mails. The instructors found that this process had four benefits; a) increased use by the students of risk-taking strategies in language learning activities; b) richer (though not necessarily more accurate) oral exchanges; c) increased use of new vocabulary and structures that students had been exposed to in the readings; and d) better production of compositions.

Gonzales-Bueno & Perez (2000) also conducted a similar study to investigate whether the use of e-mail produced greater language quantity and accuracy than the use of traditional (pencil-and-paper) medium. Their study showed that the use of e-mail had a significantly positive effect on the amount of language the students produced. However, in terms of grammatical and lexical accuracy, the use of e-mail did not have any significant advantages compared to the use of traditional (pencil-and-paper) medium.

Beauvois (1997, as cited in Abrams, 2003) combined the use of e-mail and chat to determine the effect of CMC (Asynchronous CMC and Synchronous CMC) on learners' oral performance. She concluded that students exposed to CMC perform better than their non-CMC peers in oral exams (the learners' scores were based on their pronunciation, grammatical accuracy, lexical choice and accuracy, and content).

Bulletin board research also has focused on learner's involvement and learning. King (2001) argued that bulletin board application tool created a stronger sense of community. She also stated that bulletin board promoted students-students interaction, which fostered equal participation among students. Greater social interaction with other class members was also demonstrated in Biesenbach-Lucas' study (2003) which illustrated that non-native speakers perceived bulletin board discussion as facilitating assimilation of course

readings, but not providing additional language practice. Several studies in this area have also suggested that bulletin board application tool provided a text-based environment which promotes both reflection and interaction (Lamy & Goodfellow, 1999a, 1999b; Pena-Shaff & Nicholls, 2004). The text-based environment also has the potential to strengthen writing skills and encourage more thoughtful expression of ideas (Pena-Shaff & Nicholls, 2004). In another study in this area by Kahmi-Stein (2000), it was found that there was an increase in student contribution and a decrease in the instructor's participation. She concluded that a web-based bulletin board application tool can be a useful means to integrate technology into TESOL teacher education and helps teachers develop knowledge through collaboration.

Abrams (2003), motivated by Beauvois' (1997) study, attempted to determine whether there was any difference in the oral performance of German language students exposed to synchronous versus asynchronous CMC. This study concluded that there was an increase in quantity of the language produced by students exposed to synchronous CMC. However, those students exposed to asynchronous CMC did not perform better than the control group in terms of syntactic complexity, lexical richness and density, and amount of output. It was further concluded that there were no significant lexical or syntactical differences among control, synchronous CMC, and asynchronous CMC groups.

Inspired by Long's (1996) Interaction Hypothesis, Salaberry's (1999) recommendations to incorporate sociocultural perspectives, and the result of previous studies especially by Abrams (2003), Kroonenberg (1994/1995), Van Handle & Corl (1997) and Warschauer (1996), this study will aim to investigate the effect of

asynchronous CMC as a pre- and post-task activity on the speaking and writing skills of Indonesian EFL students. I chose Indonesia not only because of practical considerations, but also because studies concerning Indonesian EFL learners and their language are rare and limited. The reason I chose asynchronous CMC because this is the most realistic form of CMC able to be applied in Indonesia, with respect to its infrastructure and internet connectivity. Considering the advantages and opportunities for language learning that asynchronous CMC can provide, and the popularity that asynchronous CMC has gained in Indonesia, this study will provide greater insight into the effect of asynchronous CMC on Indonesian EFL learners' speaking and writing skills. This study will also attempt to provide greater understanding of how to optimally use asynchronous CMC for the benefits of learners. Furthermore, this study may encourage further investigation by Indonesian teachers or lecturers into their language students, and the language they are producing.

2.6 Summary

This chapter started by discussing Long's (1996) Interaction Hypothesis, and reviewed related theories on second language acquisition, including the need to pay attention to form (focus on form) without compromising the ability to communicate. Arguments as to why second language researchers should pay more attention to how learners acquire L2 development by writing were also presented. Reading and writing play an important role in language acquisition by providing a means of linguistic input, output, and interaction, and this role has become more prominent since recent technological advances have enabled us to discuss, interact and negotiate electronically

(CMC). Studies on task-based instruction, which is the major mechanism by which the focus on form concept is implemented, were then discussed, before the principles of action research, including its definition, nature, and procedures were examined. The last part of this chapter is a review of CMC, concentrating on asynchronous CMC, and justification of its use in this study.

Chapter 3

RESEARCH METHODOLOGY

3.1 Introduction

As stated previously in the literature review, the starting points for action research are generally problems or issues arising out of the teachers' professional practice (Burns, 1999; Elliot, 1991; Wallace, 1998) or discrepancies between expectations on the one hand and actual practice on the other (Altrichter et al., 1993). The starting point of this action research study, however, is the desire or interest to improve the present professional teaching practice in Indonesia. Inspired by the advantages of asynchronous CMC discussed previously, and the desire to improve the current teaching situation, and also very few longitudinal studies using CMC (e.g., Jackstadt & Muller-Hartmann, 2001), I would like to conduct an action research study on a) how to use the bulletin board application tool and b) the effects of the interaction on this tool on students' speaking and writing skills in the Indonesian EFL context. The case study approach in this one-year-long action research study will attempt to determine the extent that participation in asynchronous CMC using the bulletin board application tool as pre- and post-task activities helps students improve their speaking and writing skills. It will also attempt to determine students' impressions of the bulletin board application tool. Concerning the role of teachers and researchers, I will be the teacher teaching these students as well as the researcher who will conduct the study and observe how this study is going on. I will be the moderator as well as the participant in the on-line discussion and the facilitator in the face-to-face classroom discussion, both in speaking and writing classes.

3.2 Aims of the Study

The aims of this year-long action research study are to find out: (1) to what extent the participation in asynchronous CMC using the bulletin board application tool as pre- and post-task activities helps students improve their speaking skills, (2) to what extent the participation in asynchronous CMC using the bulletin board application tool as pre- and post-task activities helps students improve their writing skills, and (3) the students' impression on the use of the bulletin board application tool. These findings will provide insight into how to best use the bulletin board application tool to teach EFL students, especially in the Indonesian context, and how the bulletin board application tool facilitates language acquisition.

3.3 Participants

The participants of this study will be a group of 20-25 third semester students of the English Language Education Department of Sanata Dharma University, Indonesia, who are attending speaking and writing courses. Since this is a year-long study (two semesters), data collection will be conducted when students are attending Speaking III and Writing III in their third semester, and Speaking IV and Writing IV in their fourth semester. The focus of this study is on one specific group of third semester students, therefore I will not include in the data analysis data from other groups, classes, or students.

As stated previously, I will be the participant as well as the observer/researcher in this study. As an insider, I will be able to make necessary modification and improvement in the study for the sake of better teaching and learning process.

3.4 Instructional Context

The participants meet once a week (2 x 50 minutes) for speaking as well as writing classes. Since these courses are 2 credit courses, the participants are expected to spend 2 x 50 minute sessions in class, 2 x 60 minute sessions doing homework or assigned tasks, and 2 x 60 minute sessions in independent work. For courses with two credits, therefore, the students should devote at least 4 hours a week to study outside class hours.

There are usually sixteen meetings each semester. Two meetings are usually allocated for assessments (one for a mid-term test and one for a final test), leaving 14 meetings for teaching. The online discussion work will start in week 4, which means that there will be 10 effective weeks or meetings in each semester for bulletin board discussion.

3.5 Research Design

The participants of this study will be required to participate in a two-semester asynchronous on-line discussion using the bulletin board application tool outside class hours in their speaking and writing classes. Their participation will start in the fourth week and end in the sixteenth week of each of semester. The fourth week has been chosen to start the on-line discussion in order to allow those students who do not have any prior computer experience to receive computer training, and to give enough time for the researcher to prepare any tools necessary for the study.

Student participation in the asynchronous on-line discussion is compulsory, and it will contribute 35% towards the final grade both in the speaking and writing classes. (for both speaking and writing classes, students also have one mid-term test and one final test, worth 30% and 35% respectively). For speaking classes, students will be required to post

at least one response and one question/topic for discussion relating to the topic(s) discussed in the class every week. For writing class, they will be required to post at least one response and one question/topic for writing relating to the topic(s) discussed in class. They will also be encouraged, but not required, to send their draft written compositions to the on-line discussion for feedback or comments, and give feedback or comments on their friends' drafts.

At the end of each semester, a questionnaire will be distributed to assess student impressions of the on-line bulleting board discussion tool. This questionnaire will also serve as a tool for students' reflection and self-evaluation, and will provide valuable input and feedback primarily for the evaluation, refinement, and modification of the teaching learning process, and also for the improvement of this study itself. This input or feedback is an important stage in the action research cycle, and teacher's professional development (Wallace, 1998).

3.6 Tools

The bulletin board application tool will be used for the on-line discussion, in which the participants will participate for two semesters (approximately 20 weeks) in their speaking and writing classes. For the data of this study, learners' interactions in the on-line discussion and in the face-to-face discussion in both speaking and writing classes will be recorded, and their drafts and final written compositions for each topic in the writing class will be collected.

3.6.1 Data Collection Tool

The bulletin board application tool is chosen because it is the most realistic on-line discussion tool with respect to the Indonesian context. As explained previously, the Internet connectivity in Indonesia is very poor, therefore, asynchronous forms of CMC such as the bulletin board application tool are the most realistic form for on-line discussions. Asynchronous CMC is in fact, the most popular form of CMC (Warschauer et al., 1996).

A sensitive field recorder will be used to audiotape, and a video camera used to videotape, face-to-face discussions. The data from these tools will be triangulated with those from the bulletin board application tool.

A questionnaire will be distributed at the end of each semester to assess students' impressions of the bulletin board tool. This questionnaire will also function to allow self-reflection and evaluation of what has been done by the students throughout the two semesters in their asynchronous on-line discussion. This questionnaire, as explained previously, will provide feedback for the improvement and modification of the teaching learning process and also for the refinement of this action research study.

3.6.2 Data Analysis Tool

The transcripts from on-line discussion and face-to-face discussion will be stored in my PC. I will use this PC to analyze all the transcribed students' interaction based on the communicative units, lexical richness, lexical density, and syntactic complexity (see section 3.8 for a discussion of these techniques).

3.7 Data Collection

The transcribed audio and video tapes of the students' face-to-face interactions and discussions in speaking and writing classes will be used to assess the extent participation in asynchronous computer mediated communication using bulletin board application tool will help students improve their speaking and writing skills. The students' interactions in those classes will be recorded starting at week 4, when the students start the on-line discussion. The transcripts of the twenty-week on-line discussion (including interaction logs, posting archives, and the outline of index of bulletin board postings or discussion threads) will also be saved, retrieved and printed for analysis and comparison of the written discourse (on-line discussion) and spoken discourse (face-to-face interaction) in the case of speaking skills, and of written discourses (on-line discussion) and written texts (students' draft) in the case of writing skills.

3.8 Data Analysis

Since action research has a developmental perspective (Altrichter et al., 1993), I will analyze the students' recorded face-to-face discussions throughout the one-year long study (two semesters, approximately 20 weeks). The students' interaction in speaking will be analyzed based on the number of communicative units (c-units), and on lexical richness, lexical density, and syntactic complexity (Abrams, 2003) (see below for a discussion of these analysis techniques). For writing skills, the students' draft and final compositions per topic(s) discussed in class will be analyzed for lexical richness, lexical density, and syntactic complexity. Comparison and analysis of students' interactions on the bulletin board application tool as well as their face-to-face interactions will also be

conducted. This analysis will be undertaken to trace the influence of the interactions on the bulletin board application tool on students' face-to-face interactions (in the case of speaking) and draft compositions (in the case of writing) (see Shi, 1998).

As stated above, the analysis techniques that will be used to quantify changes in student language acquisition are c-units, lexical richness, lexical density and syntactic complexity. Communicative units (c-units) are used to determine the amount of language that learners produce. C-units are closely related to T-units, but have the advantage of being able to code isolated phrases not accompanied by a verb, but which have a communicative value (Crookes, 1990). For example:

Q: Where's my hat?

A: On the table.

The answer (A) in this case is not a T-unit if we use T-unit analysis, but it is a c-unit, and it has communicative value. Abrams (2003) also argues that c-units "shed light on multiple messages provided by one individual during one turn, and thus provided a sensitive and accurate measure of the amount of language produced by the participants" (p. 162).

Laufer & Nation (1995) suggest that to determine lexical richness, the number of different words (both function and content words) be divided by the total number of words a learner uttered (Abrams, 2003, p. 162). This suggestion is supported by Warschauer (1996), because, as he puts it, "a higher TTR [type-token ratio] is generally considered to indicate greater complexity" (pp. 13-14). Thus, the formula for calculating lexical richness is:

$$\text{Lexical richness} = \frac{\text{number of different words (function + content words)}}{\text{Total number of tokens}}$$

For determining lexical density, the following formula is also adopted from Laufer & Nation (1995) :

$$\text{Lexical density} = \frac{\text{number of lexical items (nouns + verbs + adjectives + adverbs)}}{\text{Total number of tokens}}$$

The Coordination Index (Abrams, 2003; Warschauer, 1996) is used to determine the syntactic complexity. This is calculated by dividing the number of independent clauses “by the total number of combined clauses (independent coordination plus dependent subordination)” (Warschauer, 1996, p. 14). Warschauer further argues that this index is considered “to be inversely proportional to complexity, since more advanced writers or speakers of a language generally use proportionally more subordination than do beginners” (p. 14).

3.8 Implementation Issues

One of the reasons I use action research is because it is reflective in nature. The action research procedure, which is a “continuing, not necessarily linear, spiral of increasingly aware experience, which is most simply represented as a succession of stages” (Edge, 2001, p. 3) enables the researchers to plan what they want to do based on observations of, and reflections on what is happening. This procedure allows the researchers to implement what they have planned, and then observe and evaluate what they have implemented. Since the aim of action research is to improve practice, not to test predetermined hypotheses, then it is in fact advisable to change initial ideas based on reflection (if necessary), and repeat the action research process until a satisfactory solution is found (Wallace, 1998). To organize my reflection on the process of this action research study, I will keep a weekly dairy which has three columns (see Perkins, 2001).

The middle column is for immediate observations and interpretations that I write down every meeting. The right hand column is for later thoughts and insights after I reread and reflect on what I have written in the middle section, and the left column is for notes from related literature concerning the issues in the right or middle columns.

One of the implementation issues may be encountered in this study is student readiness to participate in the research. Most students are familiar with the use of computers and the Internet (i.e. e-mail, mailing list, chat) outside the classroom, but the idea of using e-mail to help them learn English and learn from each other, may be a new idea for them. I do not underestimate the students by saying this. Sometimes our students surprise us with the things they can do.

Therefore, to make students ready for the study, the first four weeks of each semester is set aside to prepare the students. These four weeks are for training those who are new to computers and do not have any prior experience with computers and thus require training. Another reason I choose the fourth week is because things take time to settle in at the beginning of each semester. During these first four weeks students are still making decisions about what subjects they have to take (they are given time up to four weeks to choose and drop courses), and the attendance lists and the rooms for class meetings are not yet fixed.

Another implementation issue for this study is my institution's readiness. Does my university have all the facilities and infrastructure that will support this study? How should I deal with the fact that there are not enough computers for all the students, and students have a very limited access to those computers that do exist? Do colleagues and the staff administrators at my institution support the study, and are they willing to help? It

is envisaged that it will take some time (1-2 years) to introduce the idea of computer use to help with English learning to both the students and colleagues at my university, and also to the staff administrators. In order to do this, initially only simple changes will be implemented. Such things may include submitting assignments and giving tasks/assignments by e-mail. The reactions, especially my students to these changes will be observed and evaluated before subsequent changes are made.

Another significant implementation issue that I have to face is the internet connectivity in Indonesia. Since there are not enough computers in the computer lab, and access to those computers is very limited, the students will be required to spend some time and money to go to internet cafés around the campus to do their tasks. Even though there are a lot of internet cafés around campus (as I mentioned in the first chapter, and that was the case in 2000), most of them have had bad internet connectivity. How my students will react to having to spend more time and money to complete the tasks and whether this will influence their participation in the study is a significant question. How this will be dealt with is also a significant issue. This is another reason why computer use in English learning will be introduced gradually, and with regular evaluation.

3.9 Summary

Action research principles are used in this study in order to assess the extent that participation in asynchronous CMC, in the form of a bulletin board application tool, as pre- and post-task activities helps a group of 20-25 third semester English students improve their speaking and writing skills. In order to trace the influence of the interactions in the bulletin board application tool on their speaking and writing skills,

their interactions in both the bulletin board and face-to-face discussion will be recorded for analysis and comparison. For speaking skills, students' face-to-face and bulletin board interactions will be analyzed and compared based on communicative units, lexical richness, lexical density, and syntactic complexity. For writing skills, the influence of bulletin board interactions will be traced by analyzing students' draft compositions based on lexical richness, lexical density, and syntactic complexity.

In this chapter issues related to the implementation of the study, especially related to the research participants' readiness to participate in the study, the readiness of the institution, and the issue concerning the bad internet connectivity in Indonesia, were also discussed.

Chapter 4

SUMMARY

Research on CMC, especially on the most popular form of CMC, asynchronous CMC (Warschauer et al., 1996), has shown that it has huge advantages for L2 learning. It has been suggested that CMC promotes students' autonomy and equality, develops students' learning skills, critical thinking and reflective learning, increases their motivation, creates a conducive environment for collaboration, interaction, and negotiation for meaning, and promotes cultural exchanges. It is these huge advantages of CMC that have inspired this action research study.

A further inspiration for this study comes from the field of second language acquisition. Long's important article, which postulates that negotiation of meaning can facilitate acquisition because "it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (Long, 1996, p. 452), prompted later theories, such as Output Hypothesis (Swain, 1985; Swain & Lapkin, 1995), focus on form (Doughty & Williams, 1998; Long & Robinson, 1998), and task-based instructions (Skehan, 1996, 2003a, 2003b). However, these theories, and the research motivated by them, mostly focus on oral language acquisition and production (Bygate, 1998). This has in part, as Harklau (2002) argues, resulted from the historical development of second language acquisition. It is necessary, however, that second language acquisition researchers broaden their understanding of the process of second language acquisition by conducting research on marginalized literacy (reading and writing) (Harklau, 2002) and its role in second language acquisition. This is especially the case given that reading and

writing prove to be as powerful means of linguistic input, output, and interaction in second language acquisition as is speaking (Harklau, 2002).

This study applied the principles of action research. The reflective nature of action research serves as a powerful tool for professional development (Wallace, 1998). Its cyclical procedure enables the discovery of better answers for educational problems based on continuous observation and reflection, without worrying about how a hypothesis should be tested, or how these answers should be generalized to other teaching contexts (Altrichter et al., 1993; Elliot, 1991).

This action research study aimed to determine the extent that participation in asynchronous CMC using the bulletin board application tool as pre- and post- task activities will help a group of 20-25 third semester students improve their speaking and writing skills. The students' participation is compulsory, to hopefully keep the level of participation in the on-line discussion high and to create a sense of purpose for the students. For two semesters (approximately 20 weeks) students' interactions and discussions using the bulletin board application tool, their face-to-face discussions in speaking and writing classes, as well as their draft and final written compositions, will be recorded and collected as the data for this study. In order to trace the effects of the interaction on the bulletin board application tool on speaking skills, I will analyze and compare the spoken discourse of face-to-face discussions in speaking classes, and the written discourses of the bulletin board discussion based on communicative units, lexical richness, lexical density, and syntactic complexity. For determining the effect of the bulletin board discussions on writing skills, the written discourses of the bulletin board

discussions and the written texts (the students' draft and final compositions) will be analyzed and compared.

The students' and the institution's readiness will be the possible major problems that I have to face in conducting this study. I believe that my students are familiar with computers and the Internet (e-mail, mailing list, and chat). However, probably they are not yet familiar with the idea of using these tools to help them learn English and learn from each other. They even probably are not familiar with bulletin board application tool and its use for learning English. Moreover, participation in bulletin board application tool requires them to be active, independent and critical. Those characteristics are seldom shown by Indonesian students in face-to-face classroom interactions. They are used to teaching environment where they become passive recipients of knowledge from their teachers or lecturers. Training, both academically and technically, on how to participate in bulletin board discussion is therefore necessary.

I also have to deal with students' frustration in dealing with poor internet connectivity. Will poor internet connectivity influence their motivation to fully participate in on-line discussion? How should the students and I deal with this issue? Moreover, the students would probably go to the Internet cafés around campus since there are not enough computers in the computer lab and access to those computers is very limited, and there have been many complaints concerning the computer workstations in the library. Even though there are a lot of internet cafés around campus (as I mentioned in the first chapter, and that was the case in 2000), most of them had bad internet connectivity. How will my students react with the fact that they have to spend more time and money to do the tasks? Will this influence their participation in on-line discussion?

Those are the issues that I have to deal concerning the students' readiness to participate in this action research study.

Concerning the institution's readiness, does my university have all the facilities and infrastructure which will support my study? How should I deal with the fact that there are not enough computers for my students and they have a very limited access to those computers? Do my colleagues and the staff administrators understand what I am doing? Are they willing to help? Those are the issues that I would have to face in conducting this action research study.

The effects that I hope for with this study are, as King (2001) explains in her article, that my students will actively participate in face-to-face classroom interactions. Since they have time to discuss and reflect their own ideas in bulletin board discussion before the actual oral, face-to-face interactions, hopefully the quality of the arguments will be enhanced and thinking will be more creative. Their written composition will be improved as well, since they have more time to reflect on their own and others' opinions and this will encourage deliberate articulation of ideas. Moreover, as many researchers (e.g., Kamhi-Stein, 1997; Lawrence, 2002; Liaw, 1998; Warschauer, 1996) have argued, hopefully their participation in bulletin board discussion will help them acquire useful computer skills, skills that are highly marketable in today's networked society.

I would like to share the results of this study, whatever the results are, with all the teachers who are eager to apply this new technology in their classrooms. I would like to show them that we should integrate various technologies in our classrooms so that our students will become comfortable with them. This is particularly important in teacher education, because if students will use technology effectively for teaching in the future,

they must use it for learning while they are students (Kovalchick, 1997). The use of CMC especially in teacher education is significant because of its potential effect on classroom dynamics (Kamhi-Stein, 2000). Hopefully, the results of this action research study will have on-going effects and always motivate teachers to conduct action research, considering the benefits that action research can give to our educational practices, and to start exploring the possibilities of the use of technology, especially CMC, in our classrooms to improve educational practices.

It is necessary therefore to conduct this study because it will be the first to try to provide useful insights into how to use a bulletin board application tool as pre- and post-task activities to teach English in the Indonesian EFL context. There is no literature available concerning teaching English in the Indonesian context, especially teaching English using CMC. This study will also provide information on how the bulletin board application tool facilitates language acquisition. This research will thus provide useful information for teachers who have the desire to try out new methods for the sake of better teaching and learning practices.

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