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Title: The Viability of Computer Mediated Communication in the Korean Secondary EFL Classroom.

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Abstract

Korean secondary EFL classrooms have suffered severely from limited opportunities for authentic language interaction, which Integrationists claim is necessary for language acquisition. The literature and previous research suggest that Computer Mediated Communication (CMC) can provide many of the alleged benefits ascribed to the Interaction Hypothesis. This study focuses on the viability of CMC in the Korean secondary EFL classroom and examines how CMC can provide Korean learners with increased opportunities to engage in meaningful negotiations in English.

Twenty pre-intermediate EFL students participated in eight rounds of CMC, which asked them to chat in pairs using a synchronous chat program MS Chat 3.0 and to solve a series of tasks that required cooperation with their assigned partner. They were also provided with a questionnaire post survey, which gathered perceived advantages and disadvantages of synchronous CMC using MS Chat 3.0. Jigsaw and information gap tasks were used to collect the data. All written transactions from 10 dyads were recorded and printed out.

The results show that Korean learners do engage in appropriate meaning negotiation for their foreign language development through task based synchronous CMC. The results also provide further confirmation for Pica et al.'s findings related to task types. Information gap tasks appeared as productive in stimulating negotiations of meaning as jigsaw tasks, and picture-drawing tasks offered a significantly higher occurrence of negotiations than other tasks. The findings demonstrate that task based synchronous CMC can provide Korean learners with more opportunities to engage in meaning negotiation in the target language, and illustrate that pictures can play a significant role in promoting

negotiations. The findings also suggest that CMC using a chat program can be an effective method for facilitating the development of interactive competence, but do also indicate that the effectiveness of synchronous CMC on the development of grammatical competence is uncertain.

This research thus suggests that task based synchronous CMC is an effective way of constructing an interactive learning environment in which learners can communicate with each other in the target language and generate meaning negotiation, especially in the Korean EFL context.

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Chapter 1. Introduction.

1.1 Background to Research.

As international communication increases in the trend towards globalization, the demand for communicative competence in English is increasing more and more in Korea. Teaching English in Korean schools, however, fails to develop English proficiency for communication. The deficiency of communicative competence in English appears to result from the lack of interpersonal interaction in English as a foreign language (EFL) learning context where English is not used as a means of communication.

Interpersonal Interaction is regarded as a fundamental requirement of Second Language Acquisition (SLA). Many researchers have claimed that language instruction requires the development of interactional competence and interaction is the key to language teaching for communication (Kramsch, 1986; Rivers, 1987; Ellis, 1988). The interactionist perspectives in SLA have placed considerable

attention on the role of interaction in general, and meaning negotiation in particular, with respect to the conditions considered theoretically important for SLA. In particular, Pica (1994) claims that meaning negotiation, as a particular way of modifying interaction, can accomplish a great deal for SLA by helping learners make input comprehensible and modify their own output, and by providing opportunities for them to access second language (L2) form and meaning. In accordance with this Interactionist perspective, the conditions for SLA are crucially enhanced by having L2 learners negotiate meaning with either native speakers (NS) or non-native speakers (NNS) (Long & Robinson, 1998). Therefore it is considered very important for L2 teachers to construct an interactive learning environment in which learners can associate with each other in the target language and negotiate meaning through interaction.

However, this kind of language interaction rarely appears in the Korean EFL context. Especially, Korean secondary classrooms have suffered severely from large sizes and limited opportunities for authentic language interaction, which is said to be necessary for language acquisition. In foreign language situations, it is very difficult to have exposure to the target language outside of the classroom. With this limitation, task based activities are provided for Korean learners to generate 'modified interaction.' In the Korean homogenous class, however, students frequently revert to their native language, L1, rather than English to resolve miscommunications, even in face-to-face oral exchanges. Consequently, this often does not lead to meaningful negotiations in English.

Another consideration within the Korean teaching context is that the advent of the computer has changed educational environments. CALL (Computer Assisted Language Learning) has been spotlighted in terms of learner centered learning, interactive collaborative learning and learner autonomy, which are based on Constructivism in which learning is viewed as an ongoing state, constructed through individuals' cognition and social interaction. Currently computer networks are being used in language teaching and learning. The use of global communication networks such as e-mail is increasingly significant. In particular, the secondary school students in Korea, as a "computer generation", have great interest in computer chatting and enjoy networked communication even outside the classroom, albeit in their first language.

These aspects of the Korean teaching context generated two ideas from which this research begins: 1) how to provide Korean learners with more opportunities to engage in meaning negotiation in English, and 2) how to combine their interest in computer-mediated chatting with their English learning.

The literature and previous research in this area suggests that Computer-Mediated Communication (CMC) can provide many advantages over face-to-face oral exchanges, such as strong motivation, equal participation and the increase of target language production (Kelm, 1992; Beauvois, 1992; Kern, 1995; Chun, 1998). In addition, it is suggested that synchronous CMC can facilitate the development of socio-linguistic and interactive competence (Kern, 1995; Chun, 1998). Moreover, two recent studies demonstrate that incidental negotiations occur in networked NNS-NS discussions, i.e. via CMC (Pellettieri, 1999; Blake, 2000). In particular, Blake (2000) suggests that CMC can provide many of the alleged benefits ascribed to the Interaction Hypothesis (refer 2.3, p.19) with greatly increased possibilities for access outside the classroom environment.

With respect to the Interactionist perspectives, the discussion on the Korean EFL situation and the advantages of CMC, it is anticipated that CMC will meet the needs of the Korean secondary EFL classrooms. Little research, however, has been conducted into the effects of CMC in the EFL context. Accordingly, it is necessary to explore the viability of CMC in the Korean secondary EFL classroom. The outcome of such exploration is expected to suggest a way of constructing an interactive learning environment within which the learners can associate with each other in the target language and generate meaning negotiation, especial in the Korean EFL context.

1.2 Research Aims

This study therefore, examines how CMC may be able to provide Korean learners with increased opportunities to engage in meaningful negotiations in English. For this purpose, this research aims: 1) to identify how CMC may enhance Second Language Acquisition, 2) to investigate whether Korean learners engage in appropriate meaning negotiation for SLA through CMC using a chat program, 3) to describe the ways in which learners engage in such meaning negotiations: 4) to investigate the student's attitudes towards CMC.

1.3 Outline of Thesis

This thesis has six chapters. The first two chapters provide a background for the research and identify how CMC can enhance Second Language Acquisition through the literature review on Second Language Acquisition and Computer Mediated Communication. The next two chapters discuss the research methodology, with the focus on mixed methods, and present findings of the experiments and survey. The final two chapters discuss the findings in light of the research literature and set out the conclusion of the research and suggestions for Korean secondary school teachers of English.

Chapter 2. Review of the Literature.

2.1 Classroom Interaction

Many researchers consider interpersonal interaction a fundamental requirement of second language acquisition. Kramsch (1986) claims that language instruction requires the development of interactional competence, and suggests a three-step approach to improve natural discourse and to build interactional competence in the classroom. The first step is to work on teacher/student oriented interaction, during which the students practice the target language with their teacher as a conversational partner. The second step is partner centered interaction, during which students learn to negotiate meaning with partners in the classroom as well as how to generate meaning. In the third step of the interactional approach, students practice ways to interact without violating social and cultural constraints that learners meet in natural conversations.

Rivers (1987) treats interaction as the key to language teaching for communication. She defines interaction as the facility in using a language when their attention is focused on conveying and receiving authentic messages. She suggests ways to promote interaction in the language classroom such as, for example, avoiding teacher-dominated classrooms, being cooperative and considering affective variables. Ellis (1988) also states that classroom second language development can be successful when a teacher

not only provides an input with x features of a target language, but when the reciprocal interaction occurs as well.

Recently, 'genuine' or 'natural' discourse has become a goal of communicative approaches in the second or foreign language classroom. Kramsch (1986) suggests that communicative competence must include the ability to express, interpret and negotiate meanings. She advocates that, for as natural a communicative situation as possible, students must be given opportunities in the classroom to interact with both the teacher and fellow students through turn-taking, giving feedback to speakers, asking for clarification, and starting and ending conversations. Nunan (1987:137) also suggests that "genuine communication is characterized by the uneven distribution of information, the negotiation of meaning through clarification requests and confirmation checks, topic nomination and negotiation by more than one speaker, and the right of interlocutors to decide whether to contribute to an interaction or not."

Genuine conversations, however, rarely appear in typical Korean classrooms of L2 learning. Typical classroom exchanges are described as the sequence of the classroom lesson; teacher initiation, student response, and teacher follow up (IRF) (Nunan, 1987). According to Nunan (1987) the repetition of the IRF cycle is a major reason for the absence of genuine communication in classroom language lessons. Dinsmore (1985) also reports that IRF cycle dominates the interaction between student and teacher, even in the EFL classrooms, and argues that the IRF cycle is incompatible with the communicative approach.

On the whole, in traditional L2 classrooms, individual language learners receive limited number of speaking turns, partly because in most classrooms a large number of language learners have to share speaking turns. Especially in classrooms where the teacher monopolizes the discourse and in which the information predominantly flows in one direction (from teacher to student learners), the less assertive and less proficient learners receive minimal output opportunities (Chaudron, 1988; Ellis, 1990; Johnson, 1995), In- particular, language learners are rarely pushed through negotiation of meaning (Lyster & Ranta, 1997; Van den Branden, 1997).

In a study of the relationship between different types of conversational interaction and SLA, Mackey (1999) highlights the importance of active participation in the interaction, suggesting that one of the features that best interacts with the learner-internal actors to facilitate language development, is learner participation in the interaction. The teacher's role in the second language classroom, therefore, is to construct an interactive learning environment in which learners can associate with each other and generate meaning in the target language.

2.2 Comprehensible Output in the Context of Interaction.

Whereas Krashen took the position that comprehensible input is a necessary condition for SLA, Swain (1985; 249) proposed the 'Comprehensible Output Hypothesis', arguing that comprehensible input is insufficient for successful SLA, and that learners must also be given the opportunity to produce compressible output. According to Swain (1985:252), the role of output is "to provide opportunities for contextualized, meaningful use, to test out hypothesis about the target language, and to move the learner from a purely semantic analysis of the language to a syntactic analysis of it." This hypothesis has been

refined and developed by Swain and Lapkin (1995), who claim that the activity of producing the target language is a mechanism that enables learners to notice a gap (a linguistic problem) in their existing interlanguage capacity. This noticing pushes them to consciously reprocess their performance in order to produce modified output. Swain (1995, 1998) argues that language production gives learners the opportunity to reprocess and modify their performance toward comprehensible output and prompts learners to stretch their current interlanguage capacity in order to fill the gap, and that having to actually produce language forces learners to think about syntax.

A recent study (Izumi, Bigelow, Fujiwara, & Fearnow, 1999) tested the Output Hypothesis by examining the effects of output on noticing and SLA. The results of this study failed to reveal the effects of output on noticing of linguistic form. The following study (Izumi & Bigelow, 2000), investigated the noticing function of output again, examining whether output promotes noticing and SLA. The data shows that output did not always succeed in drawing the learner's attention to the target form. Although the results show no unique effects of output, extended opportunities to produce output and receive relevant input were found to be crucial in improving learners' use of the grammatical structure.

Van den Branden (1997) studied the effects of negotiation on language learner's output. The results of this study revealed the extent to which, and the ways in which, the participants interactionally modified their output during negotiations were determined by the type of negative feedback they received, and that negotiations also had significant delayed effects. From these results Van den Braden (1997; 626-627) argues that L2 learners enhanced performance is primarily determined not by their level of language proficiency, but by the frequency of negotiation routines that they are engaged in. He emphasizes that negotiations pushes the learners' production level significantly higher. According to his claim (19997; 630), during negotiations learners can be pushed to the production of output that is more complete and accurate, far more than merely comprehensible. Similarly, Lyster and Ranta (1997:42) maintain that "negotiation involves... the provision of corrective feedback that encourages self-repair involving accuracy and precision and not merely comprehensibility."

On the other hand, Shehadeh (1999) investigated the role of NNS-NNS interaction and, more importantly, the role of self-initiation in providing opportunities for the production of comprehensible output. He examined the ability of NNSs to modify their output toward comprehensibility in the context of NS-NNS and NNS-NNS interactions and the degree to which such modified comprehensible output was other or self initiated. The results showed that most repairs were self initiated and that NNS-NNS interactions produced more other initiations and other initiated modified comprehensible outputs. He claims that the frequencies of these modified comprehensible outputs support the importance of modification toward comprehensible output as a process of SLA. In addition, he maintains that the NNSs ability to accomplish self adjusted comprehensible output rather than other adjusted comprehensible output is evidence that supports Swain's claim that the comprehensible output forces the learner to move from semantic analysis of the target language to a syntactic analysis of it. From these findings, Shehadeh (1999: 665) suggests important pedagogical implications that "the role of L2 learner's output should be extended beyond just being a source of obtaining feedback in order to generate more comprehensible input" and that learner based adjustments (modification) should be encourage over teacher or peer based adjustments.

Based on the output hypothesis, it would seem that, for interaction to facilitate SLA, learners need to have opportunities for output during interaction. In many second language classrooms as well as naturalistic contexts, however, learners often observe the output without producing their own output. Taking all the results from the aforementioned empirical studies, whether they support Swain's output hypothesis wholly or partially, it seems that opportunities to produce output are crucial in improving learner's use of the target structure, and negotiation promotes output production. The pedagogical implication of these findings for language learning will be that learners need to participate in interaction that offers opportunities for negotiation to take place.

2.3. Meaning Negotiation and Language Learning.

With the advent of interactionist perspectives in SLA, considerable attention has been placed on the role of interaction in general, and meaning negotiation in particular, with respect to the conditions considered theoretically important for SLA, such as the learner's comprehension of input, access to feedback, and production of modified output. (Gass, 1997: Long, 19996: Pica, 1994). Many researchers have proposed that negotiation of meaning is inevitable between speaker and hearer, because the process of communication needs expression of a message, its interpretation and negotiation of its meaning. The term 'negotiation' is defined as "the modification and restructuring of interaction that occurs when learners and interlocutors anticipate, perceive, or experience difficulties in message comprehensibility" (Pica, 1994:494). In Gass's words, "negotiation refers to communication in which participants' attention is focused on resolving a communication problem as opposed to communication in which there is a free flowing exchange of information" (1997:107).

Pica (1994) claims that meaning negotiation, as a particular way of modifying interaction, can accomplish a great deal of SLA by helping learners make input comprehensible and modify their own output and by providing opportunities for them to access L2 form and meaning. Long also states that negotiation of meaning benefits comprehension and that negative feedback obtained during negotiation may facilitate L2 development, at least for vocabulary, morphology, and language specific syntax. As cited above, these negotiations tend to increase input comprehensibility through language modifications such as simplifications, elaboration's, confirmation and comprehension checks, clarification requests, or recasts. These language modifications provide the L2 learner with negative feedback to facilitate L2 development (Gass, 1997: Long, 1996.) Long and Robinson (1988:22) have subsumed this process of negotiation of meaning under the Interaction Hypothesis, which states that the conditions for SLA are crucially enhanced by having L2 learners negotiate meaning with either an NS or NNS.

In accordance with the Interactionist Theory, linguistic input needs to become intake in order to be acquired by the learner. 'Intake' refers to input that the learner has comprehended semantically and syntactically (Schmidt, 1990). Second, input is more likely to become intake if it is noticed, and therefore Schmidt (1990) hypothesizes that noticing is necessary for acquisition. Third, learners are most likely to notice linguistic form during interaction. The principles for making intake from input through noticing have been introduced as the construct of focus on form (Long, 1988). This type of negotiation is also described in the literature as Focus on Form, which is defined by Long and Robinson as follows.

Focus on form refers to how [the learner's] focal attentional resources are allocated. Although there are degrees of attention, and although attention to form and attention to meaning are not always mutually exclusive, during an otherwise meaning focused [interaction], focus on form often consists of a shift of attention to linguistic code features...triggered by perceived problems with comprehension or production (19988:23).

Negotiated interaction and the negotiation of meaning have been taken as the basis for the provision of comprehensible input (Gass & Varounis, 1994; Holliday, 1995; Long, 1996; Pica, Young and Doughty, 1987). Some other SLA researchers have argued for the importance of negotiated interaction and the negotiation of meaning for the production of comprehensible output as well (Pica, Holliday, Lewis, Berducci & Newman, 1991; Pica, 1994; Van den Branden, 1997; Shehadeh, 1999). Putting all academic arguments together, negotiations of meaning in interaction are important, not just because they provide NNSs with an opportunity to receive input that they have made comprehensible through negotiation, but also because they provide them with an opportunity for interlanguage modification and comprehensible output.

On the other hand, Ellis (1990) indicates that L2 acquisition occurs most efficiently when learners have plentiful opportunities to negotiate meaning whenever there is some kind of communication difficulty, but that the evidence to support this is indirect and meager. Sato (1986) argues that the role of interaction in language acquisition is far more complex than has been conceived thus far. Pica (1994) also mentions that negotiations cannot account for all L2 learning, and therefore it cannot be really counted on any more than anything else can be counted on. Therefore, as Long (1996) points out, it is advisable to see the role of interaction, not as a cause of acquisition but a facilitator. Taken as whole, it seems that meaning negotiation can have positive effects on L2 development. Then, what are the conditions for promoting the negotiation of meaning?

The benefits of negotiation of meaning were first demonstrated for NNS-NS oral exchanges (Holiday, 1995; Long, 1981), but further investigations have shown that these benefits hold true for NNS-NNS oral discussions as well (Gass & Varounis, 1994). Gass & Varounis (1994) examined NS-NS, NS-NNS, and NNS-NNS conversations, noting that negotiation of meaning is most prevalent among NNS-NNS pairs. Similarly, Shehadeh's study (1999) shows that a greater amount of extended negotiation work took place in NNS-NNS interactions than in NS-NNS interactions for the modified comprehensible outputs produced. According to Shehadeh (1999: 685), "this reflects the pressure placed on NNSs in the NNS-NNS interaction to stretch and exploit their interlanguage capacity to the limit in order to make themselves understood." Furthermore, a study by Blake (2000) demonstrates that incidental negotiations commonly occurred in networked NNS-NNS discussions through CMC.

According to relevant studies, students engage in more negotiation for meaning in the small group than in the teacher fronted whole class settings (Doughty & Pica, 1984). NNS-NNS dyads engage in as much or more negotiation work than NS-NNS dyads, and learners negotiate more with other learners from different first language backgrounds (Varounis & Gass, 1983). In addition, two-way tasks which require information exchange by both or all parties produce significantly more negotiation work than one-way tasks (Doughty & Pica, 1984). In particular, Pica, Kanagy, and Falodun (1993) have predicted that

jigsaw and information gap tasks will promote more of these negotiations than other task stimuli. Taken together, it is inferred that the different level of L2 proficiency, the different L1 background, NNS-NNS dyads and two way tasks promote more negotiation of meaning.

The implication of this discussion on meaning negotiation for language classrooms is that meaning negotiation can be promoted, even in Korean secondary EFL classrooms where learners have little contact with native speakers and are of the same first language background, if the teacher constructs the NNS-NNS dyads environment with two way tasks. However, Korean students usually use their first language to solve their miscommunication (conversation breakdown) in real exchanges. Accordingly it may be more effective to employ synchronous CMC (see section 2-4 p 25) in the Korean secondary EFL classrooms as a way to promote meaning negotiation, since students are forced to use English through an English chat program.

2.4 CMC and Language Learning

In light of Interactionist perspectives, the advantage of CMC is that it can collect interaction data in which learners are engaged in meaning negotiation procedures on the basis of Interactionist research on task based language learning.

Computer Mediated Communication (CMC) is defined as " communication that takes place between human beings via the instrumentality of computers" (Herring, 1996). Warschauer (1999), on the other hand, restricted the term to modes in which people send messages to individual groups. Murray (2000) restricted Herring's definition by modifying communication to include only text-based modes. This definition also allows for the binary division of CMC into synchronous and asynchronous modes. In synchronous modes of CMC, such as chat programs, communication occurs in real time; participants react simultaneously in the same session. Asynchronous modes of CMC, such as e-mail and bulletin boards, do not require participants to be on line at the same time.

The previous research on CMC has demonstrated several advantages of using CMC over face-to-face oral exchanges. These studies show that, during CMC chats, learners report reduced anxiety about participating, and increased motivation for using the target language, both of which result in greater quantities of target language production (Kelm, 1992; Beauvois, 1992; Kern, 1995, Chun, 1998). These findings point to the suggestion that synchronous CMC allows language learners to be involved in an active learning environment, where they can experience more opportunities for the input of a target language and modify their current interlanguage capacities.

Warschauer (1995/1996) also indicated that networked CMC generated more equal participation among language learners than oral discussions did. In addition, he analyzed current research on CMC according to five features and stated that text based and computer mediated interaction has value in one to one communication, citing Koonenberg's high school French studies (Warschauer, 1997). Holiday (1997) also asserts that participation in on line literacy via networked computers empowers language learners in several ways and enhances their language learning capacities. Firstly, learners are empowered because they are able to communicate with their peers and take charge of their literacy experiences. Secondly,

the network of collaborative support and appreciation learners receive from their peers provides a highly stimulating environment for learning literacy skills (Holliday, 1995).

Current research also indicates that synchronous CMC can facilitate the development of socio-linguistic and interactive competence (Kern, 1995; Chun, 1997). Kern (1995), comparing the amounts of different discourse patterns and the characteristics of discourse for the networked computer mediated discussion and oral discussion, reports that students in the networked computer mediated communication produced more turns and sentences and used a greater variety of discourse structures than students in the oral discussion did. Chun (1998) also illustrates that CMC is an effective medium for facilitating the acquisition of the discourse skills and interactive competence. His study, investigating the language production of first and second semester learners of German shows that learners produced a wide range of discourse structures and speech acts, and that the learners' interact directly with each other, with minimal pressure on response time and without the psychological pressure of making mistakes or looking foolish.

In particular, and as opposed to previous research, two studies analyzed the advantages of synchronous CMC within the context of the Interaction Hypothesis, focusing on the role of the negotiation of meaning in terms of either modified input or modified output. Pellettieri (1999), investigating whether synchronous CMC chatting holds the same potential for the development of grammatical competence as does oral interaction, demonstrated that task based synchronous CMC, such as chatting, can foster the negotiation of meaning and form-focused interaction. Contrary to Kern's view (1995) that the increase in language production through CMC might have come at the expense of grammatical accuracy, Pellettieri (1999) suggests that CMC chatting can play a significant role in the development of grammatical competence among classroom language learners.

Blake (2000) also demonstrates that incidental negotiations commonly occurred in networked NNS-NNS discussions as well, especially with respect to their lexical confusions. In his study, fifty intermediate L2 Spanish students were asked to carry out networked discussions in pairs using a synchronous chat program, Remote Technical Assistance (RTA). Each dyad carried out a series of online tasks that can be described as jigsaw, information gap, or decision-making. The results showed that jigsaw tasks appear to lead the way in promoting negotiations as Pica, Kanagy, and Falodun (1993) had previously predicted. Blake (2000:1) suggests "CMC can provide many of the alleged benefits ascribed to the Interaction Hypothesis, with greatly increased possibilities for access outside the classroom environment."

To sum up, CMC constitutes a stimulus for increased written L2 production, strong motivation, equal participation, a text-based medium that amplifies student's attention to linguistic form, and empowerment of learners. As well, language practice through CMC can facilitate the development of interactional competence and even grammatical competence. Moreover, the task based synchronous CMC can foster the negotiation of meaning as beneficial to SLA as oral interaction. By all accounts, it is anticipated that these benefits of CMC will meet the needs of the Korean secondary EFL classroom, i.e. CMC will provide Korean secondary school learners with more opportunities for meaning negotiation. Therefore, it is necessary to examine the viability of CMC in a specific teaching context, namely the Korean secondary EFL classroom.

Based upon the aforementioned research and theories pertaining to CMC and SLA, I devised a model for use in the Korean EFL situation, to justify the viability of the CMC device.

Chapter 3. Methodology

3.1 Research Approach

As Swann (1994) mentions, the qualitative quantitative distinction is not always clear cut in practice, as applied to education research; the distinction is more on the continuum than the dichotomy. It is often useful to draw on a combination of methods that may complement one another and provide a more complete picture of language. From the viewpoint of mixed methods, this study employed a quasi-experiment and observations as a major source for data collection, along with questionnaires as an auxiliary method for the following reasons. First, a quasi experiment, as McDonough (1997) explains, yields valuable information and enables a teacher to answer some specific questions arising from his or her experience. Second, as Hopkins (1993 cited in McDonough 1997) describes, observation is a "pivotal activity with a crucial role to play in classroom research" (p 101). It is interrelated to the "research in the interests of increasing knowledge and understanding a phenomenon" and "whether that knowledge aspires to be idiographic and particular, or transferable and general" (McDonough, 1997: 104) This approach is considered the best to collect required information, when the researcher is more interested in the behavior than in the perceptions of the individuals (Kumar, 1996). Third, the questionnaire is one of the most commonly used descriptive methods in educational research and its purpose is to obtain a snapshot of conditions and attitudes. It can afford precision and clarity because the knowledge needed is controlled by the questions. In addition, questionnaires can be used on a small scale and in the classroom environment (McDonough, 1997: 171).

This research, as stated earlier, aims to investigate whether Korean learners engage in appropriate meaning negotiations for SLA through CMC using a chat program, to describe the ways in which learners engage in such meaning negotiation, and to investigate the students' attitudes towards CMC. These methods of collecting data, thus, strongly support the aims of this research.

3.2 The Setting

The place used for this study was a girl's junior high school in Pusan, Korea. Korean secondary schools are divided into two groups, i.e. junior high school and senior high school. Students enrolled in junior high schools are from seventh to ninth grade; and their ages range from thirteen or fourteen years for the seventh grade to fifteen or sixteen for the ninth grade. They study 12 twelve subjects; 10 required subjects and 2 optional subjects. English, as a required subject, is taught for four 45-minute classes a week. Classes consist of approximately thirty-eight students, who have a wide range of English proficiency.

The target school has one computer laboratory, which consists of forty personal computers in two rows. Each row consists of ten pairs of computers being opposite and side-by-side. In this study, students were paired such that no oral communication was possible, face-to-face, side by side or diagonally. During

subsequent CMC rounds, pseudonyms (see Section 3.3) and seating arrangements were changed.

3.3 Participants

The participants in this study were twenty male students of the ninth grade. All participants were native speakers of Korean who were in their third year learning English as a foreign language and were receiving four 45-minute classes of English instruction weekly. Most of them are at a pre-intermediate level of English proficiency. Their ages range from 15 to 16 years. They volunteered to participate in this research project, and were selected for their familiarity with using chat programs and their English competence. Ten of them were students whose English proficiency level was relatively higher than the others, comparing their scores to the achievement test administered by their own school and the Korean Education Development Organization. This was because unfamiliarity with chat programs could interfere with their language use and the different levels of L2 proficiency were expected to promote more negotiations of meaning. They were paired accordingly to English proficiency level, which led to 10 dyads.

To meet local ethics requirements, an Explanatory Statement (Appendix 1), Consent form (Appendix 2) and Parental Consent Form (Appendix 3), translated into Korean, was given to all participants and their parents. Their agreement to participate in this project was confirmed through both of the consent forms. To ensure that all participants would feel comfortable using computers, practice sessions were conducted before data collection began. They were allowed to use pseudonyms in order to free them from the anxiety of making mistakes in their performance, and guaranteeing their anonymity amongst all 20 students.

3.4 Instrument.

3.4.1 MS Chat 3.0

The software used in this study was the Microsoft MS Chat 3.0, a Microsoft company free program available for public use. It allows for real time, synchronous Computer Mediated Communication in Internet chat rooms. Unlike e-mail, where the entire discourse is composed and edited before transmission of the message, MS chats occur instantaneously and participants co-construct the discourse, much as in oral conversations. Students can chat using only text, as in other chat programs, or they can create a comic strip identity for themselves and chat as their favorite character. In comic mode, their words appear in 'bubbles' above their character in the strip, just like in the comics. In this study 'text mode' was used.

As in other Chat programs, MS Chat software presents users with a split screen; in the top half they view the replies from their interlocutors, i.e. the final version of their partner's composed utterances, and in the bottom half they view their own messages, letter by letter, as they type them. If a user wants to review other people's messages, he or she can scroll up or down to find their messages. MS Chat 3.0 program also has a function that allows students to use pseudonyms, which effectively hides their identities.

This chat program was used for the following reasons. First it can record all of the written transactions entered in a chat window, which provide researchers with an instantaneous transcript of all user exchanges, and all the written transcripts can conveniently be printed. Second, RTA, specially developed for the study of Blake (2000), was unavailable in Korea, although it is regarded as superior to other chat programs in facilitating the students' on-line completion of tasks. Accordingly, MS Chat 30 was supplemented by written instructions, illustrations and recorded material, as Blake (2000) suggests.

3.4.2 Communication Tasks

Eight communication tasks were selected and developed for the purpose of this study. The selection of those tasks was motivated in the first place by previous studies, e.g. Pellettieri, (1999); Blake, (2000), and in particular by two collections of articles edited by Crookes & Glass (19993a, 19993b).

An effective way to assist language learning in the classroom or to study the processes of second language acquisition (SLA) is revealed and validated through the use of communication tasks (Pica, Kanagy, & Falodun, 1993; Nobuyoshi & Ellis, 1993). The theoretical perspective which supports the use of communication tasks is that which holds that language is best learned and taught through interaction. In interaction-based pedagogy, classroom opportunities to receive, comprehend, and ultimately internalize L2 words, forms and structures are believed to be most abundant during activities in which learners and their interlocutors can exchange information and communicate ideas. Such activities are structured so that all learners will talk as a means of sharing ideas and opinions collaborating toward a single goal, or competing to achieve individual goals. (Nunan, 1987; Rivers, 1987). It is therefore maintained that "classroom and research activities must be structured to provide a context whereby learners not only talk to their interlocutors, but negotiate meaning with them as well", to engage learners in these kinds of interactions (Pica, Kanagy & Falodun, 19993: 11).

According to Pica, Kanagy & Falodun's typology, a task that promotes the greatest opportunities for learners to experience comprehension of input, feedback on production and interlanguage modification is one that meets these four conditions:

- 1) Each interactant holds a different portion of information, which must be exchanged and manipulated in order to reach the outcome.
- 2) Both interactants are required to request and supply this information to each other.
- 3) Interactants have the same or convergent goals.
- 4) Only one acceptable outcome is possible from their attempts to meet this goal.

Accordingly, jigsaw and two-way information gap tasks are regarded as being favorable for stimulating negotiation of meaning, as Pica et al pointed out. This is because they satisfy the four conditions outlined.

The eight communication tasks employed in this study were not open, but more closed tasks, such a jigsaw and information gap activities, in which the Interactants possess different pieces of information needed for a solution and, therefore must work collaboratively to converge on a single outcome. Each task was photocopied and distributed to every participant. Table 1. presents a detailed description of

each task.

	Task	Task Type	Task Instruction Given To Participants
1.	Complete the drawing	Information gap	Below is a drawing of a kitchen. Your partner has the same drawing but hers contains a number of objects (e.g. glasses, bottles,) She is going to help you fill up your kitchen by telling you what to draw and where to put it. You must not look at your partner's drawing.
2.	Drawing the picture	Information gap	Below is a plan of a flat with missing furniture. Your partner has the same plan with the furniture placed in it. She is going to help you furnish your flat by telling you what to draw and where to put it. You may ask questions.
3.	Holiday plans	Information gap	Work with your partner. Ask and answer questions to find the missing information in the following tables. Before you start, work out what questions to ask.
4.	Four people	Information gap	Work with your partner. Ask and answer questions to find the missing information about the following four people. Before you start, work out what questions to ask.
5.	Biographies	Jigsaw	Work with your partner. Ask and answer questions to find the missing information in the following short biographies of Picasso and David Livingstone.
6.	It's a fact	Jigsaw	Work with your partner. Ask and answer questions to find the missing information in the following extracts from a book of amazing facts. Before you start, work out what questions to ask.
7.	Find differences	Jigsaw	Work with your partner. You both have a drawing of a block of flats where you can see people doing different things. Your drawings are NOT the same. There are 8 differences. Ask and answer questions to try and find what is different.
8.	Find differences	Jigsaw	Work with your partner. You both have a drawing of some people in a living room. Your drawings are not the same. There are 10 differences. Ask and answer questions to try and find what is different. Circle the differences.

3.5 Procedures.

During the preparation period, MS Chat 3.0 was downloaded and set up in each computer in the computer lab. The participants were given an hour-long training session on how to access and use MS Chat 3.0 for synchronous chatting, before data collection began. A chat room was assigned to each dyad; one student was directed to create a room to enable private chat for two persons only, in order not to be disturbed by other chatters, and then the second student entered that chat room. They all used their pseudonyms to hide their identity, which eliminated the possibility of them from orally communicating with each other, for it was impossible to know who their partner was.

In the performance stage, eight rounds of Computer Mediated Chatting (CMC) were conducted with the participants being the twenty pre-intermediate EFL students. Each round was conducted after school twice a week in the computer lab for four weeks, in March - April 2000. Before beginning each round, instructions for the given task were explained to help ensure clarity of task directions. Additionally, students were asked to use only English in their chats. In each round, students were asked to chat in pairs for one hour using a synchronous chat program. After Blake's (2000) model "all students were assigned different partners for each new task in order to heighten the collaborative nature of their conversations and to avoid any student collusion that might work against the spirit of the negotiations" (p.5.) They attempted to solve a series of tasks that required cooperation with their assigned partner, on the chat window. All written instructions entered in the chat window were recorded and all the written transcripts were printed for data analysis. Observations were carried out while they performed those tasks in order to describe the ways in which they engaged in such performances.

At the final stage after eight rounds of Chat performance, all participants were surveyed with a questionnaire, (Appendix 5) which gathered opinions about perceived advantages and disadvantages of synchronous CMC using MS Chat 3.0 The questionnaire included scales and open questions for more useful information.

3.6 Methods of data analysis

In order to examine linguistic features of the students' language modifications produced in the eight rounds of CMC, all written discourse from the transcripts was analyzed qualitatively as well as quantitatively with regard to the following characteristics: (1) the number of total turns and negotiations; (2) the nature of negotiation routines; (3) other linguistic features.

The number of total turns and negotiations made by each student in each task was calculated for quantitative analysis. The linguistic features, for qualitative analysis were categorized in light of meaning negotiation (see 2.3), based on the model for NNS negotiation established by Varonis and Gass (1985). As Pellettieri (1999) and Blake (2000) illustrated, negotiation routines that arose in these networked exchanges were identified by means of their four components: trigger, indicator, response and reaction. In accordance with Blake's (2000) model, the first use of the linguistic items in question becomes the trigger, which spurs the negotiation. The partner indicates communication trouble or non-

understanding with an appropriate phrase, such as, "I don't understand X." or simply, "What's x?" indicator. The other partner then attempts an explanation or response in an effort to clarify the misunderstanding. If the negotiation is successful, the partner who indicated the non-understanding gives a reaction to the response, as a cue that he / she closes the negotiation and is ready to return to the main line of discourse by acknowledging the help given, usually means of the stock phrase such as "Yes", "Thank you" or "OK".

The response through these negotiation routines was articulated completely in English, nevertheless with some non-target like expressions typical of the students' interlanguage at this level. As Blake (2000:6) indicates, their utterances are "neither all wrong nor all right but somewhere in between, as the concept of interlanguage suggests." Their linguistic errors are not clearly definable for they involve an intricate mix of "complex misuses and omissions of structures from the target language." Therefore, defining what is correct or incorrect was excluded from the present study.

In addition, the analysis of linguistic features, non-linguistic features from observation of students' CMC performances and completed questionnaires were analyzed and categorized so as to explain participants' engagement and attitudes to CMC.

Chapter 4. Results

4.1 Linguistic Features

4.1.1 Turns and negotiations.

The language data generated across all eight tasks confirm CMC's potential for fostering the negotiation of meaning in task based interaction. From the quantitative point of view, Table 2 displays the total number of turns and negotiations found per task, and illustrates how task-oriented these negotiations are. The proportion of negotiations to turns ranges from 1.8% to 4.1%, comprising a small fraction of overall turns, similar to the previous findings from Blake's study (2000). These negotiations, however, evenly occurred in both jigsaw tasks and information gap tasks, differently from Blake (2000), in which jigsaw tasks accounted for 80-90% of the total negotiations.

Interestingly, Task 1 (Completing the drawing) and Task 2 (Drawing pictures) stimulated many more negotiations from students than other tasks. The reason for these two tasks being the most productive in triggering negotiations seemed to be as follows. First, the task sheet provided only pictures, not any language input, which plays a role as scaffolding for their discourse. This led them to produce vague utterances that caused communicative problems, which in turn triggered negotiation. Second, describing the pictures required the use of nouns and exact expressions for the location that were outside the vocabulary of most students, thus necessitating the use of circumlocution, which motivated frequent clarification requests and confirmation checks.

The number of negotiations has no relation to the number of turns. Task 8 generated the most exchanges, but did not trigger the most negotiations. In general, the number of turns and length of utterance were contrary to each other. Those who made a lot of turns usually produced relatively short

sentences. The length of utterance appeared to be varied according to task type, level and individuals language proficiency, and accordingly was not calculated in this study.

Table 2. Total Number of Turns and Negotiations.

Task	Task Type	Total Turns	Negotiations	Negotiations/Turns
1. Drawing	Info-gap	814	31	3.8%
2. Drawing	Info-gap	524	21	4.1%
3. Holiday Plans	Info-gap	571	10	1.8%
4. Four People	Info-gap	613	13	2.1%
5. Biographies	Jigsaw	551	11	2.0%
6. It's a fact	Jigsaw	540	12	2.2%
7. Find differences	Jigsaw	704	13	1.8%
8. Find differences.	Jigsaw	820	21	2.5%

4.1.2 The Nature of Negotiation Routines

As mentioned in data analysis (3.6), negotiation routines that arose in these networked exchanges were identified by means of their four components: trigger, indicator, response and reaction. From the linguistic viewpoint, a great majority of negotiations were triggered by lexical confusions and overall content of utterances, as reported by previous findings from studies of computer-networked interaction (Pellettieri, 1999; Blake, 2000). Lexical negotiations are the routines with lexical triggers in which the communicative problem is directly attributable to a particular lexical item, as shown in Example 1. In contrast, content triggers are those where a speaker's entire message is problematic, as illustrated in Example 2.

Example 1. Lexical Negotiation

Trigger A: ...there is a vace in the left cupboard, on the fist shelf

The vace is on the left

Indicator B: vace???...what is 'vace'?

Response A: vase has flowers and it looks like bottle...

vase is a flower bottle

Reaction B: do you mean 'vase'? it's vase, not vase

A: sorry...vase is right

B: that's all right...and then??

A: a coffee bottle is on the right...

Example 2. Content Negotiation

Trigger C: There are glasses in the bookcase.

Indicator D: on which shelf...on the right or on the left?

Response C: the glasses are on the second shelf in the bookcase

(Trigger)

Indicator D: oh~glasses for drinking

Reaction D: ok...and then where's the clock?

These negotiations show that students asked for clarification and explanations when they wanted to check their understanding, and they gave feedback to others, typically in the form of agreement of continuation. In these negotiations, a model form was offered to the learner through explicit or implicit feedback from a partner. According to Pellettieri (1999:69), explicit corrective feedback refers to "those utterances in which a speaker overtly indicates a problem with a partner's utterance and offers a model of form." Implicit corrective feedback, on the other hand, refers to "those negotiation moves (i.e., recasts) that provide a model form for a partner's non-target form in the previous utterance, without overtly indicating the problem."

To ensure mutual comprehension, learners often went through negotiations before returning to the main line of discourse. In example 3, taken from Task 8, students are trying to find differences between their respective pictures. E is trying to describe her picture of a man who is carrying a radio, but she does not know the word 'carry'. F pushes the conversation down from the main line of discourse in order to get confirmation that she understands E's description and further to get a definition for the word "lift". F signals the need for negotiation by a confirmation check and a direct question about the word "lift". E, responding to F's signal, offers an explanation of the meaning of "lift" by paraphrasing such as 'have something on the hand.' E's explanation is not the exact definition for the word 'lift', but eventually they come to mutual comprehension and successful communication.

Example 3. Extended negotiation routine.

E: In my picture there are two men, and how about you?

F: I my picture, one man has black air, and another man has white hair.

E: ok, black hair man is lifting a radio

F: No, my picture has no radio.

E: and then...nothing lift?

F: lift? What is lift?

E: 'lift' is maybe have something o the hand...ok?

F: no, I don't understand

E: hmmm..wait a minute...

F: Is the radio on his hand?

E: yes

F: In my picture the radio is not on the hand.

E: ok, this is difference too!

Other negotiation routines, as demonstrated in Example 3, required extended probing and negotiation between partners to resolve the initial misunderstanding. Example 3 is representative of many of the negotiations found in the data. These extended routines led to further 'push downs' in the conversations, and are indeed making the language input produced in the tasks more comprehensible for the learners. The evidence comes from the learners themselves and their level of successful task completion. In the majority of the cases of negotiation routines, learners did overtly express their understanding to their interlocutor by way of a reaction to a response, such as 'ok', 'yes', 'I see', or 'thank you'. The transcripts of the ensuing discourse also indicate that these negotiations are leading to mutual comprehension comes from the learners' level of successful task completion. Each one of the language tasks had a specific goal, and in order for participants to achieve these goals, they had to successfully communicate with and comprehend each other.

4.1.3 Other Linguistic Features

One of the salient features from the observation made while analyzing the data was the learner's self-correction. The transcripts indicate that in addition to monitoring partner utterances, learners were doing a good deal of self monitoring, as evidenced by their turn self repair. Before giving up a conversational turn, learners would often repair typographical and or spelling errors, and also repair errors involving morphological agreement. Furthermore, they repaired their utterances to make syntactic elaboration, as shown in Example 4, thus pushing their utterances to a more advanced syntax.

Example 4. Self-correction (1)

G: There's a tv set in the bookcast.

G: sorry ~, not bookcast, bookcase

G: bookcase is right

H: where? On the right or on the left?

Self correction (2)

N: ...there are one man and one woman they have food

K: they have food?

N: yes, they are have food

N: they are sit on the chair

N: they are sitting at table.. they are having food

K: in my picture they don't eat food

Another feature was that the language generated through CMC strongly resembled what would be said

in a spoken communication. As Bender (1994: 34) reported earlier, the synchronous computer mediated discussions...cluster at the 'spoken' end of the spectrum, thus confirming Ferrara et al.'s characterization of 'interactive written discourse' as both written and oral", and the language data of this study demonstrated that such discourse is much closer to the oral end of the spectrum and has much more in common with speech than with writing. In fact, students included some form of greeting, adopted some features from conversational discourse such as "well", "um..." or "haha" (laughter), and used symbols to express emotional meaning, such as multiple question marks (???) or exclamation points (!!!!), or emotions such as ^^ for smiling, as shown in Example 5.

Example 5. Spoken feature (1) greeting

L: hi!!!!!!!

Z: Hi, nice to met you ^^

L: Nice to meet you too!!!

Z: a little cold today...How about you?

L: yes! It's rainy

Z: shall we start?

L yes, let's start!

Spoken feature (2) leave - takings

O: ...we found 12th difference wow!!!!

V: it's the end?????

O: yes you had trouble.

V: we had hard time

O: Next time...let's do better!! ^^

V: thank you Bye ~~

O: goodbye *^^*

Spoken feature (3) laughter

Q: what was illegal in Wales on a Sunday until 1957?

R: it was illegal to go swimming on a Sunday

Q: hahaha it's funny

R: yes funny ok, I'll ask you a question what was first developed to help the blind

Another observed feature was non-target like expressions, typical of the students' interlanguage at this level. Again, as Blake (2000: 6) indicates, their utterances are "neither all wrong or all right, but somewhere in between". The frequent errors in their language involved misuses of singular/plural, omissions of verb (be) and articles (a, an, the), and the reverse order of words. These language errors were sometimes connected through their explicit or implicit feedback, namely negotiations, and self-corrections. But sometimes, contrary to Blake's comments (2000), these incorrect forms were explicitly passed from one to the other in their negotiations in the present study. Students copied incorrect forms from another student's message.

4.2 Student's Engagement

From the researcher's observations made during the student's CMC sessions, one noticeable characteristic of the student's engagement in CMC chats was the increased motivation and active participation. Students were so enthusiastic about their chat performance that they were absorbed in communicating in English to solve their tasks, and it was surprising, given the classroom context, for the students to be engaged to such an extent in the use of the target language. Their attempts to resolve their communication problems were so active that they always activated the dictionary function via Internet on the computer screen before logging onto their chats. On occasions, other chatters unexpectedly interrupted them. This intrusion happened either because they logged on incorrectly or a random self-surfer penetrated their chat room despite the CMC firewall. Nevertheless, they coped with the interruption successfully, persuading the intruder to leave the chat room (see Example 6). Thus their attention to their conversation never waned, but lasted throughout the session.

Example 6. Interruption and solution

S: ...and the poster is on the right side of the picture
T: yes, I understand
 Groovy girl (~groovy-girl@139.135...) has joined the Conversation
S: ?????
 Groovy girl: hi all
T: hi I am sorry but...
S: we are studying now
 Groovy girl: asl please
S: Please leave this room
 Groovy girl: huh?? Why
T: sorry we are studying now
 Groovy girl: what studying mean?
S: Please go out
 Groovy girl: don't be mean
T: we are studying at school
S: this class title is CMC...
 Groovy girl: oh sorry
 Groovy girl (Groovy girl @ 139.135...) has left the conversation
S: let's start again
T: okay

Maybe more importantly is the (assumption) that groovy girl's natural tongue was not English judging by her failure to understand the word 'studying.' If this is true (as opposed to other explanations) it shows instant meaning negotiation involving a third party. Both T and S made an attempt to explain what 'studying' meant and succeeded.

4.3 Student's Attitudes: Perceived Advantages and Disadvantages

At the end of the CMC sessions, all participants were given a questionnaire (Appendix 5) regarding their opinions on synchronic chatting using MS Chat 3.0 software. Responses to the student's evaluation questionnaire were quite favorable, with 98% agreement that the MS Chat experience was "enjoyable" and "motivating." (Q. 1 and Q. 2). Students reported several reasons for liking CMC sessions. One student wrote, "I enjoyed the MS Chat sessions because chatting on the computer is very popular among students these days." Another student remarked, "during the chat sessions I feel as if I were talking to a foreigner," Eighty five percent of the respondents agreed that it allowed them to feel freer in communicating in English in a more informal environment with less of an anxiety associated with making mistakes. There was an indication that the use of pseudonyms reduced their anxiety: "I prefer pseudonyms, for nobody knows who I am even when I make mistakes."

Student's responses to the value of CMC for improving their English language development (Q 6) ranged from "very helpful" (54%) and "helpful" (37%) to "somewhat helpful" (9%). In open-ended questions, they wrote that increased opportunities to produce output helped them improve their English communication skill: "I became confident in communicating in English through the increased opportunities to produce words and sentences for myself." Another indication was that their attention to L2 form helped develop their English vocabulary and their ability to write in English: "to make myself understood, I had to concentrate on the spelling of the words and the structure of the sentences, this improved my vocabulary and writing."

The complaints, on the other hand, were system failures or the frequent off-line status of the network, the time constraints and the slow pace of their communication due to their limited proficiency in English. Students indicated, "the frequent off-line status of the net-work interrupted our conversation flow" and "sometimes it took several minutes to sign in and log on again, and due to these problems we could not complete our tasks within the given time." Another disadvantage of CMC that students indicated was that limited proficiency in English made their communication very difficult and it took much time to resolve their communication breakdown; sometimes "it was really laborious and irritating." There was one notable comment that MS Chat could not replace the English language classroom because it could not help them practice spoken English sounds: "My pronunciation errors cannot be corrected during the CMC session."

The advantages of synchronous CMC perceived by students, thus outweigh the disadvantages. All these results of linguistic and non-linguistic features presented above provided numerous findings discussed in the next chapter.

Chapter 5. Discussion

5.1 The negotiation of meaning

This research aimed to investigate whether Korean learners engage in appropriate meaning negotiation for SLA through CMC using a Chat program. The results of this study show sufficient evidence to suggest that the Korean learners did engage in such meaning negotiations, thus corroborating the findings from the previous studies (Pelletieri, 1999; Blake, 2000), which report task based synchronous CMC fosters the negotiation of meaning.

As mentioned earlier, (see 2.3), negotiation refers to "the modification and restructuring of interaction

that occurs when learners and interlocutors perceive or experience difficulties in message comprehensibility" (Pica, 1994: 494). According to Pica's claim (1994) meaning negotiation can accomplish a great deal of SLA by helping learners make input comprehensible and modify their own output and providing opportunities for them to access L2 form and meaning. These negotiations tend to increase input comprehensibility through language modifications such as simplifications, elaborations, confirmation and comprehension checks, clarification requests, or recasts. These language modifications provide the L2 learner with negative feedback to facilitate L2 development (Gass, 1997: Long 1996)

The data produced by Korean learners during each task based CMC demonstrate that, as described in the previous chapter, the need to negotiate was indicated (signaled) in CMC chats by means of clarification requests, confirmation checks, echo questions, explicit statements of non-understanding and even inappropriate responses. The indicators (signals, in terms of Pelletieri) for negotiation brought about responses in which the original input was modified by repetition, paraphrase and elaboration. In response to these negotiations, the learners produced modified output that was form focused as well as meaning focused. These modifications, though the majority was focused on the lexicon, were also made in response to corrective feedback offered during interaction and made through self-correction. Transcripts of the interactions, thus, show that through these negotiation routines the Korean learners indeed made their input comprehensible and produced interlanguage modifications towards comprehensible output. As illustrated in the examples of the Results chapter, in spite of the fact that negotiation routines push learners away from the main line of discourse, they are ultimately bringing about mutual comprehension, and facilitating successful communication. The evidence that these negotiations are leading to mutual comprehension comes from the learners' reaction to a response and their level of successful task completion.

These results are in accordance with the previous findings (Pelletieri, 1999; Blake, 2000), which indicate that task based CMC does foster the negotiation of meaning, and that this negotiation appears to facilitate comprehension and successful communication among learners. Therefore, this study does indicate that Korean learners do engage in such meaning negotiations through task based synchronous CMC which researchers claim to be beneficial for foreign language development.

5.2 Task Types and Meaning Negotiation

One interesting finding from the results is that these negotiations are task oriented, and information gap tasks are as productive in stimulating negotiations of meaning as jigsaw tasks. Pica et al. (1993) predicted earlier that jigsaw tasks and information gap tasks would be more productive as a stimulus for meaning negotiation, whilst Blake's study shows that jig saw tasks were superior to other type of tasks, but information gap tasks were not. In this study, as the figures in Table 2 show, information gap tasks appear superior to jig saw tasks in triggering meaning negotiation. Consequently, these results support Pica's et al.s. prediction, but disagree with Blake's findings.

Another useful finding related to the task type is that pictures play a significant role in promoting negotiations. As shown in Table 2, Task 1 (Completing the Drawing) and Task 2 (Drawing the Picture) stimulated many more negotiations to turns than the other six tasks. As mentioned in the results chapter

(4.1), the reason for these two tasks being the most productive in triggering negotiations was considered to be as follows. First, the task sheet provided only pictures, not any language input, which plays a role as scaffolding for discourse. This led them to produce vague utterances that caused communicative problems, which in turn triggered negotiation. Second, describing the pictures required the use of nouns and exact expressions for locations that were outside the vocabulary of most students, thus necessitating the use of circumlocution, which motivated frequent clarifications and requests and confirmation checks.

With regard to task type, Pica et al. (1989) found that picture-drawing tasks offered the highest occurrence of NNS signals of requests for clarification and confirmation in comparison to jigsaw and discussion tasks. In this respect, the results of the present study provide further confirmation for Pica et al.'s (1989) finding by showing that picture drawing tasks offer a significantly higher occurrence of negotiations than jigsaw tasks in NNS-NNS interaction (3.9% vs. 2.13%; the mean score of tasks 1 and 2 and the mean score of Tasks 5-8). Task 1 and Task 2, as picture drawing tasks, exhibited a significantly higher proportion of negotiations than other information gap tasks and jigsaw tasks. This means, "when successful completion of the task depends primarily on the NNS supplying accurate and comprehensible output, a higher proportion of extended negotiation routines are more likely to occur" (Shehadeh, 1999). The data from these two tasks therefore demonstrate the importance of a picture's role in designing interlanguage tasks to foster the negotiation of meaning.

5.3 Interactive Competence

As mentioned in the literature review (section 2.1), interactive competence includes the ability to perform different speech acts and to negotiate meaning. Kramsch (1986) suggests that communicative competence must include the ability to express, interpret and negotiate meanings. She advocates that, for as natural a communication situation as possible, students must be given opportunities in classrooms to interact with both the teacher and fellow students through turn taking, giving feedback to speakers, and starting and ending conversations. Byrnes (1987) also advocates a greater emphasis on the learner, on speech as a process, and on the negotiative and interactive process of speaking. In relation to this, Chun (1994: 28) reports "computer assisted class discussion (CACD) provides excellent opportunities for foreign language learners to develop the discourse skills and interactive competence." The transcripts of discourse produced by Korean learners in task based CMC also support this finding by showing that learners do perform several interactive speech acts: they ask and answer questions; they give feedback to others; request clarification when they have not understood their interlocutor; they check comprehension, and they start and end conversations with appropriate greetings and leave takings. This study thus suggests that task based CMC can be an effective method for increasing interactive competence because it provides students with the opportunity to generate different kinds of discourse.

Although CMC is essentially a written practice, the interactional discourse resembles spoken conversation (see section 4.3). In this aspect (Chun, 1994) suggests that this written competence can gradually be transferred to the student's speaking competence as well. In fact, an empirical study (Kim, 1998) examined the effects of computer-mediated discussion on follow up oral discussions. In Kim's study, the experimental group that was involved in computer discussions exhibited more equal participation in the follow up oral discussions than did the control group that participated in the oral

discussions. However, Pellowe (2000) argues that the EFL/ ESL distinction is so significant that results from an ESL sphere do not equate to results or applications in an EFL sphere. As Kim's study was ESL oriented, it would be argued by Pellowe (2000) that his results are not applicable to the Korean EFL situation. This argument is well worthy of follow up in in-depth research and may provide, it is submitted, ground breaking information in so far as how oral discourse develops from CMC in an 'Asian' context.

Considering that the Korean language, as a non-Romance language, has quite a different phonological system, Korean students still need oral practice in English for their oral communication competence, as one student did comment (see section 4.3)

5.4 Grammatical Competence

One of the positive aspects of CMC is the increased use of interlanguage. As teachers of English to Korean speakers well know, the amount of language output such as the total number of turns displayed in Table 2 (see 4.1) can never be produced in the Korean secondary classroom. Classroom teachers, however, have often called the quality of interlanguage among NNSs into question worrying that NNS-NNS discussion will propagate and reinforce non-target like language. With regard to the quality of interlanguage produced during CMC chats, the previous studies offer two different viewpoints. Kern (1995) indicated that the increase in language production through CMC might have come at the expense of grammatical accuracy, characterizing this problem, viz, "Grammatical accuracy suffers with CMC and consequently learners read 'defective' French...[therefore] formal accuracy...and reinforcement of canonical discourse conversations are goals not well served by Interchange" (p.470)

On the contrary, Pelletieri (1999) asserts that this interchange is not so defective as Kern indicates, arguing, "developmental errors should be expected in any interlanguage because part of successful language learning involves formulating and testing hypotheses about the target language" (p. 82). According to his opinions, therefore, the exposure to interlanguage in CMC cannot be expected to be any more detrimental to language development than it would in the normal classroom.

The data transcripts of this research show that non-target like expressions and incorrect forms are passed from one student to another, nevertheless, all of this language seems to be less defective than in a normal classroom. This is because in CMC "students have more time to process language than in oral conversations, and because they can view their language as they produce it, they are more likely to focus on language form and monitor their messages (p.83)." In this regard, the opinions formed by Pelletieri are broadly supported. However, how the transmission of those incorrect forms affects their development of grammatical competence is uncertain.

Moreover, Pelletieri (1999) suggests that synchronous CMC can play a great role in the development of grammatical competence. Conversely, Blake (2000) raises a question on the Focus of Form approach, in particular, the issue of grammatical development, indicating that lexical negotiations predominate these networked exchanges. The present study also shows that the majority of negotiations produced during CMC were focused on Lexicon. Corrective feedback was rarely offered on morphology and syntax. This

might be because, as Blake suggests, the learner at this level doesn't have "a solid syntactic base with which to help or correct peers (p.14)." The negotiations had no significant effects on the syntactical complexity in the present study. Therefore, this observation indicates that interlanguage produced via CMC can aid in second language development but suggests that follow up grammar classes are needed for grammatical development.

5.5 Increased Motivation and Participation

From a pedagogical standpoint, one of the greatest advantages of CMC is the student's increased motivation and active participation. As previous research on CMC has demonstrated, the students in this study reported reduced anxiety about making errors and increased motivation for using the target language, both of which resulted in greater opportunities of target language production.

Every language class has a few students who are shy or more self-conscious about the mistakes they make in front of others. The use of pseudonyms during CMC chats, however, freed these students from the anxiety associated with making mistakes in their performance by hiding their identities, as one student mentioned (see 4.3). In addition, during CMC sessions, they feel freer than in any type of oral situation where they feel more of a sense of immediacy to respond or say something, because they can read another student's message and type their response at their own pace. The popularity of chatting on the computer among teenagers and the authentic language environment of CMC increased their motivation as well. In fact, sometimes, while undertaking their tasks, the pairs were interrupted by third party chatters and the students persuaded them to leave the chat room (see 4.2). One student mentioned, "Such happening was so challenging as if my English were being tested."

The increased motivation led the students to participate in the CMC actively. As the researcher observed, considering the Korean classroom context, in no other learning situation had students been engaged to such an extent in the use of the target language. However, factors that may have been at work include the 'novelty' of the experiment, the sheer change from text-oriented learning, to the students' own psychological makeup at the time. There is no doubt, that, as Mackey (1999) asserts, their active participation increases their target language production and facilitates their foreign language development.

Chapter 6. Conclusion

This study, as stated earlier, examines how CMC may be able to provide Korean learners with increased opportunities to engage in meaningful negotiations in English. For this purpose, this research aims: 1) to identify how CMC may enhance Second Language Acquisition, 2) to investigate if Korean learners engage in appropriate meaning negotiation for SLA through CMC using a chat program, 3) to describe the way(s) in which learners engage in such meaning negotiations and 4) to investigate the student's attitudes towards CMC.

The literature review of this research identified how CMC can enhance SLA. Quasi experiment and observation accomplished the second and third aim, and the fourth aim was achieved via questionnaire.

The data was analyzed and categorized by the linguistic features, students' engagement and student attitudes, and the findings were discussed in the light of the meaning negotiation and other four characteristics that emerged from scrutinizing the results.

To sum up the findings, the results of this study demonstrate that task based CMC can provide Korean learners with increased opportunities to engage in meaning negotiation in the target language. The Korean learners indeed make their input comprehensible and produce interlanguage modifications towards comprehensible output in negotiation routines, which are ultimately bringing about mutual comprehension, and facilitating successful communication. If negotiations are beneficial for the SLA process, as researchers have claimed, CMC using a Chat program can provide an effective medium for Korean learners to facilitate their foreign language development.

This study also illustrates that task type can play a significant role in promoting negotiations, corroborating Pica et al's, (1989) findings related to task types. The results further support Pica et al's. (1993) prediction that information gap tasks are as productive in stimulating negotiations of meaning as jigsaw tasks, and provide further confirmation for Pica et al's, (1989) finding that picture drawing tasks offer a significantly higher occurrence of negotiations than jigsaw and information gap tasks in NNS-NNS interaction as well as in NS-NNS interaction. This study thus demonstrates the importance of a picture's role in designing interactive language tasks to foster the meaning of negotiation.

In addition, this study suggests that task based synchronous CMC can be an effective method for facilitating the development of interactive competence because it provides students with the opportunity to generate several interactional speech acts advocated by Kramersch (1986). Chun (1994) predicted that this interactive competence would gradually transfer to the student's speaking competence. Kim (1998), in his empirical study, confirms the conduciveness of this written interactive competence to spoken communicative competence. Sotillo (2000) goes further and suggests that not only the written discourse improves, but so does the oral discourse. "As with face-to-face communication, the synchronous discussion data show the functional uses of language as students engaged in interaction, such as requesting personal information, flirting, making assertions, challenging classmates, and joking among themselves. Synchronous communication seems to encourage communicative fluency, which is generally understood as a quality of oral communication that expresses itself in coherence, fluidity, and appropriate lexical choice."

However, the distance of the first language from the target language in the phonological system still requires oral practice in the target language. Therefore, it is suggested that CMC using a chat program can be used as a powerful means of complementing, but not replacing, the normal English classroom.

On the other hand, this study indicates that the effectiveness of synchronous CMC on the development of grammatical competence is uncertain. The student's increased motivation and active participation in CMC contribute to the increased quantity of interlanguage, which can aid in second language development. This increased interlanguage, however, includes the frequent transmission of incorrect forms as well as non-target like expressions. Although interlanguage in CMC is not considered to be

more defective than it would in the oral classroom, it is questionable how the frequent transmissions of incorrect forms affect grammatical development. Furthermore, the majority of negotiations produced during CMC were focused on the lexicon; corrective feedback was rarely offered on morphology and syntax. The negotiation had no significant effects on the syntactical complexity. These two aspects thus raise a question about the effect of CMC on the learner's grammatical development. Therefore further research is needed to decide the role that synchronous CMC can play in the development of grammatical competence. Further research would also be needed for the comparison of grammatical accuracy between the networked discourse and oral discourse, within a task-based approach.

Finally, as mentioned earlier, the frequent off-line status of networking, the time constraints and the learner's limited proficiency in the target language presented shortcomings in carrying out this research. The extra time to sign-in and log on in performing CMC often resulted in the incompleteness of tasks, and the student's limited English proficiency yielded few morphological and syntactical negotiations in their networked interactions. Of course these findings cannot be generalized for all Korean learners, since this study was conducted on a small group of Korean secondary school students within a short period of time. Nevertheless, this research provides the important implications that meaning negotiation can be promoted, even in the Korean secondary EFL classroom, if the teacher constructs the NNS-NNS dyads environment with two way tasks or picture related tasks, and that CMC is an effective learning environment to promote such meaning negotiation.

Although not examined in this research, Korean education comes arguably within the realm of Confucian principles, or even neo-Confucianist applications. This society still views 'man' in a superior light to women, but change is occurring neo-Confucianist applications. It is often argued that 'girls' whilst prima facie appearing linguistically superior to boys, in fact have greater stresses, (affective factors influencing their results), (Krashen, 1986). It may well be argued following further research, that the above results will be different depending if we construct the dyads as boy-boy, boy-girl, girl-girl or unknown - unknown.

In conclusion, considering the Korean EFL context where authentic interaction in the target language rarely appears and students commonly revert to their first language, this research on the viability of CMC in the Korean secondary EFL classroom suggests that task-based synchronous CMC is an interactive learning environment within which learners can communicate with each other in the target language and generate meaning negotiation.

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