The Effects of Synchronous Computer Mediated Communication (SCMC) on English Language Learners' Oral Proficiency Development

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Abstract:

This study allowed pairs of English language learners, a class in Turkey and a class in Spain, to have synchronous audio communication over the Internet. One component of the study had a quasi-experimental research design with two English oral communication classes in Turkey. The class who received CMC integrated instruction formed the experimental group and the class who followed regular English oral communication instruction constituted the control group. Oral proficiencies of the learners were measured at the beginning (pretest) and at the end of the study (posttest) through elicited 5-minute speech samples from each learner. Quantitative analysis indicated that the difference between the posttest scores of the experimental group and control group was not statistically significant at $p < .05$.

1 Introduction

The last two decades have seen a rapid growth of interest in the use of technology in many areas of language teaching/learning. Several studies have been conducted exploring various aspects of Computer Assisted Language Learning (CALL). One fundamental question which CALL researchers have been trying to answer has been whether or not technology improves language learning (Fotos & Browne, 2004; Warschauer, 2004).

Some of the previous studies displayed how learners improve their grammatical competence and lexical knowledge through negotiated input, corrective feedback, and modified output, using a variety of modification devices during their networked negotiation. "However, one area that remains both problematic and contentious is that of oral language development" (Nunan, 2005, p. 2), although technological advances and particularly the Internet presents vast amount of opportunities for improving learners' oral skills. As Cziko and Park (2003) highlight,

> "Until quite recently, synchronous audio and video communication required special software and hardware along with the use of costly ISDN telephone lines …. However, recent advances in programming, computer speed, and Internet bandwidth have brought the ability to talk with and even see others anywhere in the world to millions of home and educational users at little or no additional cost above that incurred for the computer hardware and the Internet connection." (p. 16)

One of the new convenient network options for oral language practice is *Skype* which "is a free, Internet-based alternative to commercial phone service" which allows "your computer to act like a telephone" through VoIP

(Voice over IP) (Godwin-Jones, 2005, p. 9). Skype users need to have a headphone with a microphone for the two-way oral communication to take place. This software program can be used not only for one-to-one oral exchanges, but also for conference calls which may hook up up to five Skype users over the Internet. Some other features the program offers include recording Skype exchanges for further reference or study, using a regular telephone to work with Skype through a USB to regular phone line connector, receiving calls from traditional telephones to Skype users, and getting instant messages from GSM mobile phones.

Yet, these are largely untapped resources for language learners. In terms of research, too, "this area is in its infancy" as Nunan (2005, p. 3) points out. Particularly, there is scarcity of research which explored the effects of online oral communication on language learners' speaking performance.

2 Method

2.1 Participants

A total of 49 learners of English were involved in this project. Twenty-seven of these constituted the partner group in Spain. The rest, twenty-two participants, were undergraduate freshman students at an English-medium university in Ankara, Turkey. These students were majoring in English teaching (pre-service English teachers). The data for this study came from these 22 pre-service English teachers only.

Another group of 22 students in the Turkish context (another section of the same class) was used as the control group for the quasi-experimental component of the study. All of these 44 students in the Turkish setting were enrolled in two different sections of the speaking skills class which aimed to improve students' oral communication skills in English. The students were placed into two sections of this class by the department administration based on an alphabetical list of students' last names. There were a total 5 sections of this class and the first two sections which the researcher taught were included in the study. In both sections 22 students were registered.

The networked group lived in Spain. They were also undergraduate university students trying to improve their English skills. The students were majoring in agriculture and they were enrolled in an English as a foreign language class. Their proficiency level in English ranged from intermediate to upper-intermediate.

2.2 Research Design

One component of the study had a quasi-experimental research design with two English oral communication classes in Turkey. The class who received CMC integrated instruction formed the experimental group and the class who followed regular English oral communication instruction constituted the control group. Oral proficiencies of the learners were measured at the beginning (pretest) and at the end of the study (posttest) through elicited 5-minute speech samples from each learner. The students' oral performances on the pretest and the posttest were graded over 5 using an oral assessment scale. The mean scores were calculated and independent samples t-tests were run in order to answer the first research question.

In this collaborative project, the partner groups had synchronous audio communication over the Internet for one class session each week for 6 weeks in the 2006 Spring semester. The students were assigned partners at the beginning of the

study but when there were absences, they had other partners when needed. The students were not supplied with any predetermined topics for this oral exchange, but they all tried to explore about their partners and their country with reference to personal and cultural issues.

2. 3 Procedures

In order to find a partner group who would be willing to engage in computer-based virtual conversation for a semester, first the researcher posted an electronic call for collaboration on several electronic discussion lists and key-pal boards. After an exchange of electronic messages with a number of interested other parties, the researcher (and the instructor of both classes in Turkey) and the instructor of the class in Spain agreed to be parties in this project. For establishing the oral communication network between the groups in Turkey and Spain, the *Skype* software program, which is an Internet-based free commercial phone service, was decided to be used. It was chosen not because it is the first or only software product which provides a channel for real-time oral communication over the Internet, but because it is perhaps the most widely used one, and because it is free of charge, and more importantly, due to the good sound quality it provides.

2.4 Research Questions

The following research question guided the study:

> Will the experimental group who had CMC integrated instruction display better oral proficiency on the posttest as compared to the control group?

3. Results

Participants' pre-test and post-test scores were entered into SPSS. An independent samples t-test was run to compare the pretest scores of the two groups. As can be seen in Table 1, the difference between the pretest scores of the experimental group and the control group was not statistically significant at $p < .05$.

Table 1 Independent samples t-test results for the pre-test mean scores of the control and experimental groups

	Mean	St. Dev.	t	df	Sig.
Control group	**3,77**	**1,11**			
			,726	**42**	**,472**
Experim. group	**3,55**	**,963**			

Another t-test was run to compare the posttest scores of the two groups. The results indicated that the difference between the posttest scores of the experimental group and control group was not statistically significant at $p < .05$. The results are displayed Table 2. The experimental group who had CMC integrated instruction did not have higher oral proficiency scores on the posttest as compared to the control group. Therefore, it can be concluded that the CMC integrated instruction did not bring about any statistically significant differences in learners' oral proficiency as compared to the control condition.

Table 2 Independent samples t-test results for the post-test mean scores of the control and experimental groups

	Mean	St. Dev	t	df	Sig.
Control group	**4,50**	**,673**			
			-,253	**42**	**,802**
Experimental group	**4,55**	**,510**			

Similar to the results of previous studies, the present study reveals that computer mediated collaborative communication is an intricate human activity which is influenced by an

inter-relationship of many factors including varying individual and institutional commitment, differences in technological know-how and computer access, and social constrains. Also as Belz (2002) also reports, mismatches in language proficiency may have a bearing on both the interpersonal and linguistic aspects of online collaborative partnerships. Furthermore, "personal rapport is considered to be a significant factor in successful telecollaborative foreign language study" (Fischer, 1998, p. 72, as cited in Belz, 2002).

Although many language learners may have access to the Internet and the required free software to be able to interact orally with speakers of the language they are learning over the Internet, they may not make use of these invaluable resources for various reasons. Among these barriers to be overcome may be hardware problems (Liddell & Garrett, 2004). Cziko and Park (2003, p. 26), for instance, mention that "even at the University of Illinois at Urbana-Champaign with its international reputation for technological development and application (and where the first graphical Web browser, Mosaic, was developed), language students do not yet have ready access to microphone-equipped computers." Furthermore, things may not work out neatly as you plan them at the beginning of an online collaborative project. Some learners on either side of the partnership may drop out of the project, or even though they may stay they may not participate in the online exchanges as willingly as some others.

4 Conclusion

The lessons drawn from this study lead toward challenges ahead. It is noteworthy to mention that establishing long-distance networked collaboration poses special research challenges not only due to the required advanced technology, but more importantly because of several learner- and culture-related factors, briefly discussed above, that should be taken into account. "Research has indicated that there is no single automatic *effect* of using online communication, but rather that processes and results vary widely depending on a range of logistical, pedagogical, and social factors" (Kern, Ware & Warschauer, 2004, p. 244).

As Kern, Ware and Warschauer (2004, p. 254) highlight, "language educators should use the Internet not so much to teach the same thing in a different way, but rather to help students enter into a realm of collaborative inquiry and construction of knowledge, viewing their expanding repertoire of identities and communication strategies as resources in the process." The challenge lies in making the most of the potential afforded by these new technologies while working around their limitations, and also exploiting the innovative ways in which our learners might engage in computer-based virtual conversation to meet their communicative needs. This, however, is likely to be no easy task, given the multitude of factors involved and the varying dynamics of their intricate interrelations.

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