

## Effects of Synchronous CMC on Thai EFL Learner Speaking Anxiety and Fluency

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### บทคัดย่อ

ความวิตกกังวลเป็นประเด็นที่สร้างปัญหาในการเรียนรู้ในกิจกรรมที่เน้นการสื่อสารซึ่งเป็นกิจกรรมหลักในวิธีการสอนภาษาอังกฤษแบบสื่อสาร (Communicative Language Teaching) ซึ่งการใช้การสื่อสารผ่านระบบคอมพิวเตอร์ (Computer Mediate-communication) เป็นวิธีที่ได้รับการสนับสนุนทางทฤษฎีและการทดลองว่าเป็นวิธีที่ช่วยให้ผู้เรียนคลายความวิตกกังวล และสามารถพัฒนาการพูดภาษาอังกฤษของตนเองได้ งานวิจัยนี้จึงมีจุดประสงค์เพื่อศึกษา 1) ผลของการใช้การสื่อสารผ่านระบบคอมพิวเตอร์ที่มีผลต่อความวิตกกังวลในการพูดของผู้เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศในประเทศไทย และ 2) ผลของการใช้การสื่อสารผ่านระบบคอมพิวเตอร์ที่มีผลต่อความคล่องแคล่วในการพูดของผู้เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศในประเทศไทยกลุ่มตัวอย่างคือผู้เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศในประเทศไทยจำนวน 40 คน ถูกเลือกโดยการสุ่มตัวอย่างแบบเฉพาะเจาะจง (Purposive sampling) กลุ่มตัวอย่างถูกแบ่งเป็นสองกลุ่มเพื่อทดสอบผลของการใช้การสื่อสารผ่านระบบคอมพิวเตอร์ที่มีผลต่อความวิตกกังวลและความคล่องแคล่วในการพูดของผู้เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศในประเทศไทย เครื่องมือวิจัยได้แก่ แบบทดสอบพูดภาษาอังกฤษก่อนและหลังเรียน และ แบบทดสอบความวิตกกังวลในชั้นเรียน (Foreign Language Classroom Anxiety Scale) (Horwitz, 1986) วิเคราะห์ข้อมูลโดยใช้ การเปรียบเทียบค่าเฉลี่ยตัวแปรที่เป็นอิสระจากกัน (Independent t-test) การเรียบเรียงค่าเฉลี่ยตัวแปรที่เป็นไม้อิสระจากกัน (Dependent t-test) ค่าเฉลี่ย และ ส่วนเบี่ยงเบนมาตรฐาน ผลการวิจัยพบว่าการสื่อสารผ่านระบบคอมพิวเตอร์มีสิ่งผลในการลดความวิตกกังวลและเพิ่มความคล่องแคล่วในการพูดของกลุ่มตัวอย่าง ผลของการทดลองเป็นประโยชน์ต่อการออกแบบการจัดการเรียนรู้โดยเน้นการสื่อสารซึ่งจะนำไปสู่การพัฒนาทักษะการพูดภาษาอังกฤษต่อไป

**คำสำคัญ:** วิธีการสอนภาษาอังกฤษแบบสื่อสาร การสื่อสารผ่านระบบคอมพิวเตอร์ ความวิตกกังวลในการใช้ภาษาต่างประเทศ ความคล่องแคล่วในการพูด

### Abstract

The issue of speaking anxiety is bothering communicative tasks- the main activities in the communicative language teaching(CLT) approach, and the use of synchronous CMC in lowering anxiety level and improving speaking fluency is theoretically and empirically supported. The current study aimed to investigate 1) investigate the effects of synchronous CMC on EFL students' level of speaking anxiety and 2) effects of synchronous CMC on EFL students' speaking fluency. 40 EFL students in Thailand were purposively selected as the participants of the study. The participants were divided into 2 groups of the experiments to prove the effectiveness of synchronous CMC as a mode of communication. The research instruments were, a set of pre and posttest and Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, 1986). The data were analyzed by Dependent t-test, Independent test, Mean score and Standard Deviation. The result of the study indicated the benefits of synchronous CMC in lowering level of anxiety and improving EFL learners speaking performance in terms of fluency. The result of the study could be beneficial in curriculum design in CLT approach and EFL speaking improvement.

**Keywords:** CLT, Synchronous CMC, FL Anxiety, Speaking Fluency

## Introduction

Communicative Language teaching (CLT) has been promoted in EFL context since the 90s with the belief that language should be instructed by the mean of communication (Richard, 2006). The teaching approach has been promoted by scholars as it is believed to contribute to more effective learning environment and better outcome of students' performances. For example, Littlewood(2000) indicated that CLT could promote interaction of learners. To clarify, learners are asked to have more interactional communication than focusing on grammar and vocabulary. Moreover, communicative competence promoted in the approach could motivate learners to produce more output (Ellis, 2003). In CLT, learners are not expected to produce output with a perfect grammar structure. Instead, as long as they keep the communication going on, it would be acceptable. Similarly, CLT clarifies goal of study to language learners. According to Shastri (2010), the main function of language is to convey meaning from one to another. Consequently, instead of focus on forms, procedural processes of meaning expression should be focused. This would motivate learners to participate more in the learning processes as CLT focuses on the main function of language – meaning expression.

Nevertheless, it takes several issues to contribute classrooms with CLT approach. Brown (2007) described six core principles of communicative language teaching. 1) Classrooms should focus on communicative competence and pragmatic. 2) Meaning should be considered as the functional purpose of language. 3) Fluency with meaningful expression should be promoted as the prior objective of the course. 4) Authentic communicative situations should be considered in both productive and receptive learning activities. 5) Learners autonomy could be promoted by students' self-understanding. 6) Teachers should act as facilitators instead of class controllers.

It seems that real-time communicative activity plays a great role in the classrooms in CLT approach. However, the activity could not be easily

practiced especially in the EFL context as there are factors affecting performances of learners. According to Krashen(1981), learners of a second language face affective filters-obstacles in language acquisitions. These filters prevent input to reach acquisition function at the brain and make it more difficult to acquire language. One of the affective filters considered to play an important role in language learning is anxiety (Dulay and Burt, 1977). Particularly in the communication classes, level of anxiety could be risen and it affects students' performance. Horwitz(2001) indicated that second language speaking is one of the most anxiety generative activities for L2 learners. Moreover, Woodrow (2006) also indicated that L2 learners' level of anxiety could increase when they encounter communicative situations with native speakers.

Consequently, learners' anxiety level becomes one of an important issues in English speaking development since lowering the affective filters could lead to more opportunities in target language learning and acquisition (Krashen, 1981). Application of technology in language classrooms seems to be a part of learning in the new era. For decades, scholars suggests benefits of using technology in improving L2 learners in terms of providing more opportunities to expose target language (Lee, 2000), enabling cooperative learning (Gillespie, 2006), and lowering anxiety level (Ozerol, 2009). Therefore, the current study aimed to apply a synchronous computer mediate-communication technology to EFL speaking classes with the purpose to lowering learners' anxiety and increase their speaking performance in terms of fluency.

## Literature Review

### Computer mediate-communication

Computer mediate-communication (CMC) is one of the tools in the network technology era that plays an important role in language learning. According to Romiszowski and Mason (2004), two types of CMC could be separated: synchronous and asynchronous CMCs. The former refers to real time communication

like instant message communication (e.g.chatrooms) while the later refers to the offline interaction application where learners can post messages without expectation that others would reply immediately (e.g., forum, web board). Synchronous CMC could benefit language learning in several aspects as it could be considered as another mode of communication where interlocutors have a chance to encounter to less pressure and overcome affective filters in the listening process (Simson, 2002; Coniam& Wong, 2004).

#### *Theoretical framework*

Computer mediate-communication (CMC) is theoretically supported to lower the level of speaking anxiety. According to Krashen(1981), anxiety is considered as an emotional variable- an affective filter that obstructs part of brain that functions for language acquisition. Communicating in the CMC mode could give more time for learners to relax and untie them from emotional impacts. Moreover, in Levelt's (1989) model of speech production, people have to conceptualize ideas of words to generate messages from information storage in their brain. The processes of speech production happen in the rapid manner, and L2 learners usually produce mistakes during the processes. CMC provides more time for learners to process input, conceptualize ideas, and produce output. Therefore, they theoretically tend to produce more accurate and fluent output. Lastly, it is believed that people's attention is limited. Providing more planning time would make it less complex for learners to manage attention to execute tasks (Robinson, 2011). Therefore, allowing learners to have an online chat in English might let them allocate attention to the vocabulary and grammar that are necessary for the upcoming tasks and reduce level of anxiety which could later leads to more fluent output production.

#### *Related Studies*

With regard to the theoretical possibility that synchronous CMC could be beneficial in speaking development, studies have been conducted to

investigate the effect of the communication mode on speaking both in terms of level of anxiety and speaking fluency (e.g., Payne and Ross; 2005; Abal, 2013; Razagifard, 2013; Satar&Ozdener, 2014). For instance, Payne and Ross (2005) studied possibility of text chat and oral production transference. 24 Spanish native speakers learning English were selected in the study. The result of the study showed that working memory affected the performance of both text chat and speaking, and there was a possibility to connect the ability to create language in synchronous CMC and oral communication. Abal(2013) compared the used of CMC and ordinary task preparation on 11 English language learners. The experimental group took a chance to prepare speaking class by using text chat software while the control group prepared speaking task in ordinary way. The result of the study showed that students in the experimental group reduced more speaking anxiety in performing speaking task. In addition, Satar&Ozdener(2014) compared the uses of text chat and voice chat software on 30 EFL students speaking fluency and level of anxiety. The result of the study indicated that both synchronous CMC software affect positively on the participants' speaking fluency while text chat could reduce more level of anxiety.

#### *This study*

The issue of speaking anxiety is bothering communicative tasks- the main activities in the CLT approach, and the use of synchronous CMC in lowering anxiety level and improving speaking fluency is theoretically and empirically supported. The current study, therefore; aimed to apply synchronous CMC in the speaking classrooms in order to increase students' performance in terms of fluency and decrease their speaking anxiety with the following research questions. What were the effects of synchronous CMCon EFL students' level of speaking anxiety?

What were the effects of synchronous CMCon EFL students' speaking fluency?

## Methodology

### *Participants*

The participants were 40 first year EFL students in Rajabhat Mahasarakham University, Thailand. The participants had low proficiency in English and tended to have high level of speaking anxiety considering from their experience in English interaction exposure. The participants were separated into 2 groups using their performance in the pretest to control speaking fluency and anxiety level variables. The experimental group was given time to have synchronous CMC before performing a speaking task while the control group was given time to prepare the test on their own. All participants were treated anonymously.

### *Research Instruments*

#### *Speaking pre and posttest*

Speaking fluency was justified by the performances in pretest and posttest. In the pretest, the participants were asked to take a narrative speaking task in the topic of "My Most Beautiful Day". After the treatments, they took the task again in the similar genre. The topic of posttest was set as "My happiest Moment". The participants were given 5 minutes to perform each task.

#### Foreign Language Classroom Anxiety Scale (FLCAS)

Level of speaking anxiety was measured by using Foreign Language Classroom Anxiety Scale

(FLCAS) developed by Horwitz (1986). The questionnaire designed in 5 Likert scales consists of 33 item questions on the issues of anxiety. The questionnaire was given right after both pre and posttest in order to examine participants' level of speaking anxiety.

### *Data Collection*

The purpose of the study was to investigate effect of using synchronous computer mediate-communication to reduce EFL students' level of speaking anxiety and increase speaking fluency. All participants were taken pretest in the first phase of the data collection. The FLCAS was used after the test in order to examine participants' level of anxiety. Speaking fluency was calculated by using articulation per minute formula. Speaking fluency of participants was used to separate them into 2 groups of 20. The experimental group were given 10 minutes to prepare the posttest by chatting in English with their teachers in the topic related to the pre and posttest. In the control group, participants were also given 10 minutes to prepare the posttest on their own. Then students took the posttest and the FLCAS was employed.

### **Data analysis**

The data were analyzed by using dependent t-test, independent test, mean score and standard deviation. The detail of data collection and data analysis could be found in the following table.

**Table 1** Procedures in data collection and data analysis

| Phase | Data collection | Description  | Data analysis  |
|-------|-----------------|--|--|
| 1     | Pretest         | Participants took pretest and did FLCAS questionnaire. Their Performance was used to group clarification.        | Dependent T test Mean Score Standard Deviation                         |
| 2     | Treatment       | The experimental group prepare posttest by synchronous CMC, and the control group prepare posttest by their own. | -  |
| 3     | Posttest        | Participants took posttest and did FLCAS questionnaire. Fluency and speaking anxiety were compared.              | Dependent t-test, Independent test, Mean Score and Standard Deviation. |

### Results of the study

**Table 2** Participants' performance before treatments

| Group/variables      | n  | $\bar{x}$ | S.D. | sig  |
|----------------------|----|-----------|------|------|
| Experiment/fluency   | 20 | 110.25    | 2.0  | .264 |
| Control/fluency      | 20 | 111.60    | 2.9  |      |
| Experimental/anxiety | 20 | 4.51      | 2.0  | .051 |
| Control/anxiety      | 20 | 4.45      | 1.86 |      |

It could be seen on the table that at the beginning of the experiment, the students from both experimental and control group started at the same point of both speaking fluency and anxiety. In terms of fluency, there was no significant difference between

the group ( $p=.264$ ). Moreover, there was no significant difference found in terms of anxiety ( $p=0.51$ ) as well. The students were treated with different methods, and the results of the study were used to answer the questions in the following issues.

### Level of Anxiety

**Table 3** Students' level of anxiety

| Group                   | Pretest   | Posttest  | Sig   |
|-------------------------|-----------|-----------|-------|
| Experimental (In group) | 4.51      | 3.89      | *0.00 |
| Control (in group)      | 4.45      | 4.44      | 0.61  |
| Between group           | 4.51-4.45 | 3.89-4.44 | *0.01 |

The result of the study showed that after preparing the speaking task by chatting in English, the participants in the experimental group could reduce their level of speaking anxiety as significant difference

was found between their performances in pre and posttest ( $p=.00$ ). On the other hand, the students in the control group still felt that they were bound with anxiety since there was no significant difference

between their performance in pre and posttest ( $p=.61$ ). Lastly, the result of independent t test analysis showed that there was significant difference between groups of experiments after they were treated by the

different methods of speaking task preparation ( $p=.01$ ). It could be interpreted that the use of synchronous CMC could reduce participants' level of anxiety. Speaking Fluency

**Table 4** Students speaking fluency

| Group                   | Pretest     | Posttest      | Sig   |
|-------------------------|-------------|---------------|-------|
| Experimental (In group) | 110.25      | 116.15        | *0.01 |
| Control (in group)      | 111.6       | 110.75        | 0.25  |
| Between group           | 110.25-11.6 | 116.15-110.75 | *0.02 |

The results of the study showed that the participants in the experimental group could improve their speaking fluency after having the treatment with synchronous CMC as significant difference was found between their performance in pre and posttest ( $p=.01$ ). In contrast, the participants in control group could not improve their speaking fluency after preparing speaking task on their own since there was no significant difference found between pre and posttest performance ( $p=.25$ ). Moreover, in the between group comparison, the result of the study indicated that the experimental group students outperformed the students in control group as the significant difference was found in their posttest performance ( $p=.02$ ). It could be indicated that the synchronous CMC also affected positively on the students' speaking fluency.

#### Discussions and conclusions

The study could be concluded that the use of synchronous CMC was beneficial in lowering EFL students' level of anxiety and increasing their speaking performance in terms of fluency. The result of the study could be drawn to the following discussions.

The benefits of synchronous CMC to the participants in the study could be explained by the theoretical supports. The students in the experimental group had a chance to produce language in chat before they took the posttest. The content of chat could be linked to the languages they used to execute the posttest. Consequently, the students could reduce

the level of anxiety because it was easier for them to conceptualize idea to generate the familiar message (Levelts' speech production, 1986). This familiarity also made it more comfortable for them to allocate attention to other specific task aspects and produce more fluent output (Robinson, 2001). Lastly, the lowered anxiety level could also meant that an affective filter in the processes of acquisitions was removed. According to Krashen(1981), this could explain how the participants in the experimental group outperformed those in the control group.

The result of the study was related to Payne and Ross (2005). In the previous study, it was found that there was a possibility that L2 learners could transfer their ability in text-chat language production in oral output production. The result of the study confirmed this possibility as the learners having text chat for speech preparation could reduce their level of anxiety and increase their quality of oral production. Moreover, the result of the study also supports the study of Abal(2013) and Satar&Ozdener(2014) who indicated that the use of synchronous CMC as a mode of communication could reduce level of anxiety of EFL students. The result of the study also confirmed that benefits of synchronous CMC in improving EFL students' oral output quality (Razagifard, 2013; Satar&Ozdener, 2014).

The result of the study could be implicated to both pedagogical and empirical aspects. For curric-

ulum design, the use of synchronous CMC could be beneficial for the classes that have students with high level of anxiety. Especially for the EFL students who rarely use English outside classroom. It is an anxiety generative activity for them to produce language in an online situation like speaking. Making them be familiar with second language production could reduce their anxiety and may bring to better quality of output. Therefore, encourage the EFL students to chat in English in their basis activities or using synchronous CMC as a warm up activity before speaking class could be an interesting method. Moreover, the study confirmed benefits of technology in language classrooms. In the 21<sup>st</sup> century learning, it is undoubt-able that technology is playing a great role. Therefore, proving effectiveness of technological methods could be one of the responsibilities of scholars in the field.

### Limitations

The study could be concluded to evidence benefits of synchronous CMC in reducing EFL learners' level of anxiety which could later results in development in oral output production in terms of fluency. However, limitations in design of the study could also found. First, the lack of triangulation of data collection could lead to doubtful results of the study. Especially in anxiety issues, the use of one questionnaire could not be reliable to examine the actual behaviors of the participants. Further studies could triangulate the processes of data collection to gather more reliable data. Moreover, the data was gathered only in the short period which might not contribute to the effectiveness of the method in the long terms. The performance of the participants could be depleted in long run. Next studies could employed longitudinal data collection in order to prove the effectiveness of synchronous CMC in long term speaking development.

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