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The Impact of Teaching Communication Strategies on English Speaking of Engineering Undergraduates

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Abstract

This study investigates the impact of teaching communication strategies on Thai engineering undergraduate students' communication strategy use and strategic competence. Fifty-seven engineering undergraduate students were taught ten communication strategies for ten weeks and responded to a self-report communication strategy questionnaire before and after the communication strategy instruction. In order to elicit the students' use of communication strategies, 12 of 57 students completed four speaking tasks before and after receiving the instruction. Data were collected using a self-report communication strategy questionnaire, four speaking tasks, and a rating form indicating the level of strategic competence. The findings from this questionnaire showed that the instruction in the use of the ten communication strategies had a positive influence on the students' reports of the use of those strategies. With respect to the speaking tasks, the findings showed that the students successfully transferred all ten taught communication strategies to

their utterances in the four speaking tasks after receiving the 10 weeks of communication strategy instruction. In addition, the findings from the assessment of the students' level of strategic competence showed some improvement in the students' strategic competence.

Keywords: communication strategies, communication strategy instruction, strategic competence

Introduction

Second or foreign language learners of English may find themselves in a difficult situation when they need to express their ideas in English but possess limited vocabulary. In order to get their message across, some learners may use oral communication devices or strategies to solve their deficiency in vocabulary. Such devices or strategies are commonly known as communication strategies (CSs). The term "communication strategies" usually refers to the devices used by second or foreign language learners to cope with their oral communication problems in order to achieve their communicative goals (Faerch & Kasper, 1983).

The notion of CSs was first introduced and included as one of Selinker's (1972) five central processes of the interlanguage system of second language learners. However, Tarone (1977) provided the first five types of CSs. One of the most important subsequent studies of CSs was Canale and Swain's (1980) investigation of strategic competence. Their concept of strategic competence was used as a starting point for defining and classifying CSs in later studies.

To date, most empirical studies on CSs have advocated the investigation of learners' use of CSs in relation to variables such as proficiency level (e.g., Chen, 1990; Kebir, 1994; Wannaruk, 2002), task types (e.g., Poulisse & Schils, 1989; Rabab'ah & Bulut, 2007), and teaching pedagogies related to CSs (e.g., Dornyei & Thurrell, 1991; Yule & Tarone, 1991; Dornyei, 1995; Maleki, 2010; and Mariani, 2010). There is, however, little agreement as to

whether it is beneficial to develop second or foreign language learners' strategic competence and communication strategy (CS) usage in the foreign language classroom. The current study, therefore, aims to provide more evidence on the teachability of CSs. The study offers a deeper understanding of the relations among CS instruction, Thai university engineering students' reports of CS use in the self-report communication strategy questionnaire, their actual use of CSs in their task performance, and their improvement in strategic competence. The benefits of communication strategy instruction have been supported by a number of previous researchers (Dornyei, 1995; Brett, 2000; Lam, 2004; Nakatani, 2005; Le, 2006; Lin, 2007; Maleki, 2007; Kongsom, 2009; Lam, 2010; Maleki, 2010; Mariani 2010). However, a review of the available literature and previous studies revealed that there have been only a small number of studies on the instruction of CSs to Thai EFL learners in Thailand. Most of these studies have tended to investigate the students' use of CSs. Therefore, it is worth exploring the impact of the explicit teaching of CSs on Thai engineering undergraduates in order to contribute to the research in the field.

Literature Review

Definitions and classification of CSs

To date there has been no complete agreement on the definition of CSs. Two different theoretical approaches to defining CSs in the literature are the interactional approach and the psycholinguistic approach (Dornyei & Scott, 1997). The interactional approach to defining CSs was influenced by Tarone's (1980) work, which emphasized the negotiation of meaning between interlocutors. CSs are seen as "tools used in a joint negotiation of meaning where both interlocutors are attempting to agree as to a communicative goal" (Tarone, 1980:420). In other words, CSs are devices that learners use to enhance their negotiation of meaning as well as to convey their message while interacting with each other. Based on the interactional approach to defining CSs, Tarone (1977) classified CSs into five main

categories: paraphrase, borrowing, appeal for assistance, mime, and avoidance.

Another approach to defining CSs, the psycholinguistic approach, was influenced by the work of Faerch and Kasper (1983), Bialystok (1990) and the Nijmegen Group (i.e., Bongaerts & Poulisse, 1989; and Kellerman, 1991). According to Faerch and Kasper (1983), CSs are viewed as an individual's mental response to a communication problem instead of a mutual response by two interlocutors. They then defined CSs as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal" (p.81). Accordingly, Faerch and Kasper (1983) divided CSs into two major types: (1) reduction strategies and (2) achievement strategies. Reduction strategies are the attempt to avoid communication problems, whereas achievement strategies are the attempt to solve a problem by expanding the learner's communicative resources. In line with Faerch and Kasper (1983), Bialystok (1990) viewed CSs as a response to cognitive mechanisms operating on mental representations in linguistic processing. She then set up a general cognitive framework for two components of language processing: 1) "the process of structuring mental representations of language which are organized at the level of meanings (knowledge of the world) into explicit representations of structure organized at the level of symbols (forms)" (Bialystok, 1990:118); and 2) "the ability to control attention to relevant and appropriate information and to integrate those forms in real time" (Bialystok, 1990:125). Based on the process-oriented approach, Bialystok (1990) classified CSs into analysis-based strategies (i.e., circumlocution, paraphrase, transliteration, word coinage and mime), and control-based strategies (i.e., language switch, ostensive definition, appeal for help and mime). In addition, the Nijmegen Group proposed conceptual strategies (i.e., analytic strategies and holistic strategies) and linguistic strategies (i.e., morphological creativity and transfer). The psycholinguistic approach, therefore, views CSs as strategies for overcoming limitations in lexical knowledge: the learners' problem-solving behaviours arise from gaps in their

lexical knowledge and the description of CSs is limited to only lexical-compensatory strategies.

The discussion of the claims made by the interactional approach and the psycholinguistic approach in defining CSs has led to the conclusion that CSs should be regarded not only as problem-solving mechanisms for dealing with communication breakdowns, but also as tools for discourse functions for the negotiation of meaning. In the current study, the term "communication strategies" is defined as the "devices used by a learner to solve oral communication problems and to reach the communicative goals in a speaking situation." This definition provides a specific and precise description of CSs.

The teachability of CSs

The teachability of CSs has been discussed to a considerable extent in the field of CSs and there have been different arguments in favour of or against the instruction of CSs. Some researchers in this field (Paribakht, 1985; Bongaerts & Poulisse, 1989; Bialystok, 1990; Kellerman, 1991) have questioned the validity and usefulness of the instruction of CSs. They have pointed out that second language (L2) learners have already developed the ability to solve communication problems as part of their first language (L1) so there is no need to train them to use these strategies in L2 (cited in Manchon, 2000). On the other hand, a number of researchers (Faerch & Kasper, 1983, 1986; Willems, 1987; Tarone & Yule, 1989; Dornyei & Thurrell, 1991; Dornyei, 1995; Manchon, 2000; Lam, 2004; Nakatani, 2005; Le, 2006; Lin, 2007; Maleki, 2007; Kongsom, 2009; Lam, 2010; Maleki, 2010; Mariani, 2010) advocate the instruction of CSs and support the development of learners' strategic competence.

According to Manchon (2000), the arguments which lend support to CS instruction involve the following issues. First, "strategic competence is a part of the learners' communicative competence" (Manchon, 2000:18); thus, developing L2 learners' strategic competence can help learners overcome their communication problems. According to Dornyei and Thurrell

(1991), Tarone (1984), Willems (1987), O'Malley (1987), and Tarone and Yule (1989), one aim of L2 teaching is to develop learners' use of CSs in order to enhance their communicative competence. The second argument concerning the teachability of CSs involves the issue of the transfer of L1 skills. Even though there are some similarities between the communication in L1 and L2, there exist some differences. That is, L2 learners may encounter a variety of communication problems in using L2, so they may need to develop additional CSs to solve them. Lastly, CS instruction contributes to the learners' "security, self-confidence, and motivation to communicate" (Manchon, 2000:20). According to Manchon (2000), CS training may contribute to enhancing the learner's sense of security and self-confidence when he or she attempts to communicate using his/her interlanguage resources, and thus attempts to communicate in the L2. Additionally, Mariani (2010) supported the training of using CSs because CSs "encourage risk-taking and individual initiative" (p.44). He further explained that CSs "give learners the feeling that they can increase their control over language use, play an active role, make some choices and become more responsible for what they say and how they say it" (Mariani, 2010:44).

In summary, the researchers that support the CS instruction suggest teaching CSs explicitly and/or implicitly because these methods may help develop the students' knowledge of CSs. Drawing on the suggestions of these teaching methods, this study provided explicit CS instruction over a period of 10 weeks on 10 CSs through the developed CS instruction lessons. The details of these lessons will be described in the description of the CS instruction program.

Assessing strategic competence

Even though strategic competence has been included in various models of communicative language ability, it has received less attention in the field of L2 assessment.

Strategic competence was first included as an important element of Canale and Swain's (1980) model of communicative

competence. According to them (ibid.), strategic competence is defined as the use of "verbal and non-verbal strategies that may be called into action to compensate for breakdowns in communication due to performance variables or to insufficient competence" (p.30). The concept of strategic competence was further explained by Bachman and Palmer (1996) when they defined strategic competence as "a set of metacognitive components, or strategies, which can be thought of as higher order executive processes that provide a cognitive management function in language use as well as in other cognitive activities" (p.70). According to this definition, the role of strategic competence comprises metacognitive strategies (goal setting, assessment, and planning) and their interaction with topical knowledge (real world knowledge) and affective schemata in language use.

Apart from Bachman and Palmer's (1996) framework of strategic competence components, Saif (2002) included the components of strategic competence in her description of the speaking ability components in a test construct for International Teaching Assistants (ITAs). According to Saif (2002), strategic competence is the "ability to set goals for the communication of the intended meanings, assess alternative linguistic means (especially when there is a linguistic problem preventing the speaker/hearer from completing a default task) and to draw upon the areas of language knowledge for the successful implementation and completion of a chosen task" (p.150). Based on the above definition, the ability components of strategic competence are divided into five main areas: goal setting, use of verbal strategies, use of non-verbal strategies, achievement of communicative goals through production, and achievement of communicative goals through comprehension.

The most recent empirical study on assessing strategic behaviors in the field of L2 testing is Huang's (2013). This study aimed to investigate the strategic behaviors that test-takers used when taking the International English Language Testing System (IELTS) speaking test. The participants were 40 Chinese-speaking,

English-as-an-additional-language students at both intermediate and advanced levels. The data were collected by using stimulated verbal reports and observations of the actual production in order to examine the strategic behaviors of those that were taking the IELTS speaking test in a stimulated testing situation and those that took the test in a non-testing situation. The results showed that the participants used 90 different individual strategies during the IELTS speaking test. Overall, there were 2,454 instances of strategy use in the participants' performance of the three tasks. Of the six strategy categories, metacognitive, communication, and affective strategies were used most frequently and social strategies were used least frequently.

As has been noted, the above researchers have proposed components for strategic competence and have elaborated on each component. They integrated CSs with the strategic competence that language learners should master in order to cope with communicative problems and to achieve their communicative goals. For the purpose of this study, five criteria and components of strategic competence were used to assess the students' level of strategic competence. These five criteria included goal setting, use of verbal communication strategies, use of non-verbal communication strategies, achievement of communicative goals through production, and achievement of communicative goals through comprehension.

Research questions

1. Does the instruction of specific CSs increase students' reports of the use of CSs on the self-report communication strategy questionnaire?
2. Do students increase their use of taught CSs while performing the speaking tasks? If yes, what types of the taught CSs are used by the students while performing these tasks?
3. Does the instruction of specific CSs improve the students' level of strategic competence regarding the speaking tasks?

Methodology

Participants

A purposive sampling technique was employed to select the participants for this study. The participants comprised a group of 57 Thai engineering undergraduates in the Faculty of Engineering at King Mongkut's University of Technology North Bangkok (KMUTNB) in Thailand. Their educational background was relatively similar as they were undergraduates studying in the same faculty and university. They received the grades between C+ and A in the previous English conversation course. At the time of the data collection, all of them had received the 10-week communication strategy-based instruction and completed the self-report communication strategy questionnaire in the pre- and post-CS instruction. Finally, only 12 of 57 participants that received grades between B and A in the previous English conversation course were asked to complete the four speaking tasks. These 12 participants were chosen because they had approximately the same level of English ability and having a small sample helped this study gain a more in-depth investigation into the students' actual use of CSs in the four speaking tasks.

Description of the communication strategy (CS) instruction program

Due to the limited time of the CS instruction program, only 10 of the 16 CSs that could be used to solve potential communication problems were taught to the students by the researcher. These CSs were approximation, circumlocution, use of all-purpose words, appeal for help, clarification request, pause fillers and hesitation devices, topic avoidance, comprehension check, confirmation check, and self-repair. According to many researchers (Dornyei, 1995; Lam, 2004; Nakatani, 2005; Le, 2006; Lin, 2007; Maleki, 2007; Kongsom, 2009; Lam, 2010; Maleki, 2010; Mariani, 2010), these ten CSs are teachable and useful for coping with oral communication difficulties. The following table is a summary of the objectives of the CS instruction lessons.

Table 1: A summary of the objectives of the CS instruction lessons

Lesson	Objectives
Lesson 1	- Introducing the concept and benefits of CSs - Teaching and practicing approximation
Lesson 2	- Teaching and practicing circumlocution
Lesson 3	- Teaching and practicing use of all-purpose words
Lesson 4	- Teaching and practicing appeal for help
Lesson 5	- Teaching and practicing clarification request
Lesson 6	- Teaching and practicing pause fillers and hesitation devices
Lesson 7	- Teaching and practicing topic avoidance
Lesson 8	- Teaching and practicing comprehension check
Lesson 9	- Teaching and practicing confirmation check
Lesson 10	- Teaching and practicing self-repair

The explicit strategy instruction of each CS followed by practice lasted 60 minutes in each lesson. In order to practice using the ten taught CSs, the students were encouraged to work in pairs or in groups. First, the definition and concept of the target strategy were introduced. Then, the students had their awareness of strategy use raised by discussing why and how people use the strategy. Next, they were encouraged to take risks and use the strategy. After that, examples of the actual use of the strategy were provided and the students practiced using them. Finally, they evaluated their strategy use at the end of the lesson.

Research Instruments

- ***Self-report communication strategy questionnaire***

In order to investigate the students' self-perceived use of CSs, the self-report communication strategy questionnaire was administered to 57 students before and after the CS instruction. Thirty-two five-point Likert-scale statement items for 16 CSs were modified from Kongsom's (2009) self-report communication

strategy questionnaire, which was based on a set of CSs suggested by Tarone (1977), Faerch and Kasper (1983), Bialystok (1990), Dornyei (1995), and Dornyei and Scott (1997). These 16 CSs were included in the self-report communication strategy questionnaire because they were commonly reported being used by Thai learners in previous studies (Wongsawang, 2001; Wannaruk, 2002; Weerarak, 2003; Pornpibul, 2005; Kongsom, 2009). The data from the questionnaire were analyzed using descriptive statistics and t-tests in order to examine whether there were significant differences in the means of reported strategy use across the entire self-report communication strategy questionnaire. The internal reliability of the returned self-report communication strategy before and after the CS instruction, estimated using Cronbach's alpha, was .79 and .83 respectively, which indicated that all of the items in the questionnaire could measure the students' reports of CS use with enough consistency.

- ***Speaking tasks***

In order to elicit the students' actual use of CSs, 12 out of 57 students were asked to complete a set of four speaking tasks before and after the CS instruction. The four different tasks were two interactive tasks, and two descriptive tasks. These tasks were designed according to previously-reviewed CS studies. In addition, the chosen tasks were authentic and provided a situation that allowed the students to use different CSs to convey their meaning and to solve their oral communication problems. The details of the four tasks are as follows:

1. **Oral interview:** In this task, each student was interviewed by the researcher. The oral interview consisted of twelve questions, e.g., What's your major?, What do you like about KMUTNB?, and What do you want to do after you graduate?
2. **Conversation task:** In this task, a situation was presented to each pair of students by the researcher and then both students discussed it. A sample situation is presented below:

Situation: *You have just won a trip around the world. You have to discuss and plan a schedule and tell why you want to visit certain places. You must agree on the schedule.*

3. **Cartoon description:** Four cartoon pictures about an old lost man were presented to the students and they were asked to describe the pictures to the researcher.
4. **Topic description:** In this task, each student was given an abstract topic such as "liberty," "honesty," and "engagement," and was asked to explain the topic to the researcher.

The recorded data obtained from the different tasks were transcribed. Then the researcher and another Thai EFL instructor independently coded all of the transcribed data from the speaking tasks. After that the frequency of the 12 students' use of CSs from the pre- and post-speaking tasks was counted. The level of coding agreement was also computed in order to check for reliability.

- ***Rating form for assessing the students' level of strategic competence***

In order to investigate whether the instruction of specific CSs could improve the students' level of strategic competence in their speaking tasks, a rating form was developed. In the rating form, each component of strategic competence was evaluated when the students performed the four speaking tasks before and after the CS instruction. The five main components of strategic competence were goal setting, use of verbal communication strategies, use of non-verbal communication strategies, achievement of communicative goals through production, and achievement of communicative goals through comprehension. These five components of strategic competence were adopted from Saif's (2002) ability components of strategic competence. In order to evaluate the validity of the rating form, a draft of it was submitted to three experts in order to rate the Item Objective Congruence (IOC). The completed rating form was then used to assess the students' level of strategic competence in the speaking

tasks. The researcher and one Thai EFL instructor with a Ph.D. in English language teaching separately watched the VDO clips and rated each student's ability level in the speaking tasks before and after the CS instruction. The two raters rated the students' strategic ability on a scale from "None" (0) to, "Limited" (1), "Moderate" (2), "Extensive" (3), and "Complete" (4). After that, the scores of the students' level of strategic competence given by the two raters were calculated in order to find the average scores of the students' ability level in each component. Then, the total scores for each component were computed to find the means and standard deviations. Finally, a paired-samples t-test was used to find out whether there were significant differences between the mean rating of the students' level of strategic competence before and after the CS instruction.

Findings

Self-report communication strategy questionnaire

In order to investigate whether teaching specific CSs can increase students' reports of the use of CSs, a self-report communication strategy questionnaire was administered to 57 students before and after the CS instruction. The purpose of using this questionnaire was to gain knowledge of the students' self-perceived use of taught and non-taught CSs in general. The questionnaire contained 32 five-point Likert-scale statement items (for 16 CSs). The students reported on their use of each strategy from "never" (1) to "most often" (5). In order to examine whether there was a significant difference in the student's reports of the use of CSs in the pre- and post-CS instruction, a paired-samples *t*-test (two-tailed) was employed. The findings are shown in Table 2.

Table 2: Comparison of the overall mean scores of CS use reported by all students on the self-report communication strategy questionnaire in the pre- and post-CS instruction

N (Students) =57	N (CSs)	Overall mean score (M)	Standard deviation (SD)	t-value	Sig (2-tailed)
Pre-CS instruction	16	2.83	0.45		
Post-CS instruction	16	3.10	0.56	-2.431	.028*

*Significant at $p < .05$ level

As seen in Table 2, the overall mean score for the reported CS use in the pre-CS instruction was 2.83 (*SD*=0.45), whereas the overall mean score for the reported CS use in the post-CS instruction was 3.10 (*SD*=0.56). These results indicated that the students reported significantly high levels of the use of CSs on the self-report communication strategy questionnaire after the 10 weeks of CS instruction. The results of the paired-samples t-test also showed a significant difference between the pre- and post-CS instruction at the .05 level (*t*=-2.431, *p*=.028).

In order to explore the change in the students' reports of CS use on the self-report communication strategy questionnaire, Table 3 shows the comparison of the mean ratings and rank order of the use of CSs in the pre- and post-CS instruction.

Table 3: Comparison of the rank order of the use of CSs reported by all students on the self-report communication strategy questionnaire in the pre- and post-CS instruction

Rank order		Communication strategy	Pre mean	Post mean
Pre	Post			
1	1	Pause fillers and hesitation devices	3.67	4.12
2	10	Non-linguistic strategy	3.57	3.03
3	3	Topic avoidance	3.28	3.68
4	9	Clarification request	3.03	3.10
5	2	Approximation	3.00	3.84
6	13	Message abandonment	2.96	2.70
7	14	Literal translation	2.88	2.64

Rank order		Communication strategy	Pre mean	Post mean
Pre	Post			
8	8	Appeal for help	2.83	3.11
9	6	Confirmation check	2.80	3.28
10	11	Comprehension check	2.76	3.00
11	7	Use of all-purpose words	2.70	3.15
12	12	Code switching	2.65	2.65
13	5	Self-repair	2.55	3.36
14	4	Circumlocution	2.38	3.56
15	16	Foreignizing	2.10	2.02
16	15	Word coinage	2.05	2.20

As shown in Table 3, there were some changes in the rank order of the reports of the use of CSs before and after the 10 weeks of CS instruction. Although there were some slight changes in the rank order of the least popular CSs, the rank order of the most popular CSs reported by the students was still the same (pause fillers and hesitation devices and topic avoidance). After the 10 weeks of CS instruction, it should be noted that the students reported relying less on L1-based strategies, such as literal translation, and were less inclined to use message abandonment and foreignizing. All of these strategies changed their rank order from first to seventh place. However, some CSs became more popular after the 10 weeks of CS instruction. The first rise in the rank was approximation, which rose from rank 5 to 2. In addition, confirmation check rose from rank 9 to 6 and word coinage rose from rank 16 to 15. There was also a dramatic increase in some taught CSs. For example, use of all-purpose words rose from rank 11 to 7, self-repair rose from rank 13 to 5, and circumlocution rose from rank 14 to 4.

Speaking tasks

In order to examine whether the teaching of ten specific CSs would increase the students' use of these strategies, 12 out of 57 students were asked to complete the four speaking tasks before and after the 10 weeks of CS instruction. The four different tasks

consisted of two descriptive tasks (describing cartoon pictures and topic description) and two interactive tasks (oral interview and conversation task). The researcher and a Thai EFL instructor independently coded all of the transcribed data from the speaking tasks. After that the frequency of the 12 students' use of CSs from the pre- and post-speaking tasks was counted and the level of coding agreement was computed in order to check for reliability. The inter-coder reliability was at .964 in the pre-speaking tasks and .926 in the post-speaking tasks, which indicated high coding agreement. The following table compares the frequency of the students' use of CSs per 100 words in the pre- and post-speaking tasks.

Table 4: Comparison of the frequency of the students' use of CSs per 100 words in the pre- and post-speaking tasks

Strategy	T/W		T/W x 100=F		Pre-Post speaking task gains
	Pre-speaking tasks	Post-speaking tasks	Pre-speaking tasks	Post-speaking tasks	
Taught CSs					
Pause fillers and hesitation devices	286/3825	557/5968	7.48	9.33	+1.85
Approximation	86/3825	275/5968	2.25	4.61	+2.36
Self-repair	40/3825	80/5968	1.05	1.34	+0.29
Circumlocution	37/3825	152/5968	0.97	2.55	+1.58
Confirmation check	27/3825	70/5968	0.71	1.17	+0.46
Topic avoidance	26/3825	25/5968	0.68	0.42	-0.26
Use of all-purpose words	10/3825	50/5968	0.26	0.84	+0.58
Clarification request	7/3825	19/5968	0.18	0.32	+0.14
Comprehension check	2/3825	12/5968	0.05	0.20	+0.15
Appeal for help	0/3825	19/5968	0.00	0.32	+0.32

Strategy	T/W		T/W x 100=F		Pre-Post speaking task gains
	Pre-speaking tasks	Post-speaking tasks	Pre-speaking tasks	Post-speaking tasks	
Non-taught CSs					
Massage abandonment	58/3825	0/5968	1.52	0.00	-1.52
Code switching	27/3825	2/5968	0.71	0.03	-0.68
Non-linguistic strategy	2/3825	21/5968	0.05	0.35	+0.30
Total	608/3825	1282/5968	15.91	21.48	5.57

Note: T= total raw frequency of CS use; W= total number of words; F= frequency of CS use per 100 words

As shown in Table 4, the use of the ten taught CSs increased in the post-speaking tasks. Approximation (+2.36), pause fillers and hesitation devices (+1.85), and circumlocution (+1.58) were used more frequently in the post-speaking tasks. However, there were minimal changes in the frequency of the other six CSs: use of all-purpose words (+0.58), confirmation check (+0.46), appeal for help (+0.32), comprehension check (+0.15), and clarification request (+0.14). It should be noted that the students used topic avoidance less frequently in the post-speaking tasks although they were taught to use this strategy. In order to look further at some of the changes in the students' actual use of CSs, Table 5 compares the rank order of the frequency of the use of CSs before and after the CS instruction.

Table 5: Comparison of the rank order of the frequency of the use of CSs per 100 words in the pre- and post-CS instruction

Rank order		Communication strategy	Pre-CS instruction	Post-CS instruction
Pre	Post			
1	1	Pause fillers and hesitation devices	7.48	9.33
2	2	Approximation	2.25	4.61
3	12	Message abandonment	1.52	0.00
4	4	Self-repair	1.05	1.34
5	3	Circumlocution	0.97	2.55

Rank order		**Communication strategy**	**Pre-CS instruction**	**Post-CS instruction**
Pre	**Post**			
6=	5	Confirmation check	0.71	1.17
6=	11	Code switching	0.71	0.03
7	7	Topic avoidance	0.68	0.42
8	6	Use of all-purpose words	0.26	0.84
9	9	Clarification request	0.18	0.32
10=	8	Non-linguistic strategy	0.05	0.35
10=	10	Comprehension check	0.05	0.20
11	9	Appeal for help	0.00	0.32

According to Table 5, it is interesting to note that there were no changes in the rank order of the six taught CSs: pause fillers and hesitation devices, approximation, self-repair, topic avoidance, clarification request, and comprehension check. After the 10 weeks of CS instruction, the highest rank order of the frequency of the use of taught CSs was still pause fillers and hesitation devices (9.33). However, the lowest rank order of the frequency of the use of taught CSs in the pre-speaking tasks was appeal for help (0.00) because no student used this strategy in the pre-speaking tasks. In the post-speaking tasks, the lowest rank order of the frequency of the use of taught CSs was comprehension check (0.20). In addition, there were some slight changes in the rank order of three taught CSs: circumlocution rose from rank 5 to 3, confirmation check rose from rank 6 to 5, and use of all-purpose words rose from rank 8 to 6.

For the non-taught CSs, two CSs (non-linguistic strategy and code switching) were still used by the students, whereas message abandonment was not employed in the post-speaking tasks. There were also substantial changes in the rank order of these strategies; for example, the rank order of the frequency of the use of message abandonment dropped from rank 3 to 12, and code switching dropped from rank 6 to 11.

Assessment of the students' level of strategic competence

In order to examine whether there was a significant difference in the students' level of strategic competence before and after the CS instruction, a paired-samples t-test (two-tailed) was used in this study. The findings are presented in Table 6.

Table 6: Comparison of the overall mean scores for the students' level of strategic competence in the pre- and post-CS instruction

	N (Students)	Overall mean score (M)	Standard deviation (SD)	t-value	Sig (2-tailed)
Pre-CS instruction	12	0.92	0.51		
Post-CS instruction	12	1.87	0.68	-7.264	.002*

*Significant at $p < .05$ level

As shown in Table 6, the overall mean score for the students' level of strategic competence before the CS instruction was 0.92 (*SD*= 0.51), while the overall mean score for the students' level of strategic competence after the CS instruction was 1.87 (*SD*= 0.68). With respect to the paired-samples t-test, the results showed a significant difference between the students' level of strategic competence before and after the CS instruction at the .05 level (*t*= -7264, *p*= .002). These results indicated that the students' level of strategic competence improved after receiving the 10 weeks of CS instruction.

In order to look in greater detail, the findings for the mean scores for the students' ability level for each component of strategic competence are presented in Table 7.

Table 7: Comparison of the mean scores for the students' ability level for each component of strategic competence in the pre- and post-CS instruction

No.	Strategic competence component	Pre-CS instruction		Post-CS instruction	
		Mean (N=12)	Standard deviation	Mean (N=12)	Standard deviation
1	Goal setting	0.96	0.62	2.29	0.54
2	Use of verbal communication strategies	1.42	0.79	2.50	0.64
3	Use of non-verbal communication strategies	0.08	0.29	0.83	0.33
4	Achievement of communicative goals through production	1.17	0.39	2.17	0.39
5	Achievement of communicative goals through comprehension	0.96	0.33	1.54	0.66

Key: 0.00-0.80= none; 0.81-1.60= limited; 1.61-2.40= moderate; 2.41-3.20= extensive; and 3.21-4.00= complete

As shown in the table, the mean scores for the students' level of strategic competence increased in every component, especially "use of verbal communication strategies." After the 10 weeks of CS instruction, the students' mean scores for the ability level in the "use of verbal communication strategies" were higher and rated at an extensive level (*M*= 2.50). In addition, their mean scores for the ability level in "goal setting" and "achievement of communicative goals through production" also increased and were at a moderate level (*M*= 2.29, 2.17). However, there were minimal changes in the students' ability in the "use of non-verbal communication strategies" and "achievement of communicative goals through comprehension" since they were rated at a limited level after the CS instruction (*M*= 0.83, 1.54). These findings indicated that the 10-week CS instruction appeared to positively influence and help improve the students' level of strategic competence when performing the speaking tasks.

Discussion

Research question 1: *Does the instruction of specific communication strategies increase students'* reports *of the use of CSs on the self-report communication strategy questionnaire?*

The analysis of the self-report communication strategy questionnaire revealed that the students reported using a wide range of CSs before receiving the CS instruction. However, only 2 strategies among the 16 CSs, which were "pause fillers and hesitation devices" and "non-linguistic strategy," were reported being used at a high level before the students received the 10-week CS instruction, while the remaining strategies fell at medium- to low-usage. However, after receiving the 10-week CS instruction, there were statistical increases in the students' reports of the use of ten taught CSs on the self-report communication strategy questionnaire. The instruction in the use of these CSs appeared to cause some changes in the students' reports of the use of the taught CSs. There was also a dramatic increase in some taught CSs, especially "circumlocution," "approximation," and "self-repair," after the CS instruction. However, the findings on the non-taught CSs showed that there was a dramatic decrease in the reports of the use of almost all types of non-taught CSs. It is possible that the instruction and practice of the ten CSs for 10 weeks might have raised the students' awareness of the use of these strategies and decreased their reports of the use of the five non-taught CSs. The benefits of the CS instruction have also been supported by many previous researchers (Brett, 2000; Lam, 2004; Nakatani, 2005; Le, 2006; Lin, 2007; Maleki, 2007; Kongsom, 2009; Lam, 2010; Maleki, 2010; Mariani, 2010).

Research question 2: *Do students increase their use of taught CSs while performing the speaking tasks? If yes, what types of the taught CSs are used by the students while performing these tasks?*

The analysis of the four speaking tasks showed that the students successfully transferred all ten taught CSs to their

utterances while performing the four speaking tasks after receiving the 10-week CS instruction. Among the ten taught CSs, "pause fillers and hesitation devices" was most frequently employed in both the pre- and post-speaking tasks. There were also increases in the rank order of the use of three taught CSs, i.e. circumlocution, confirmation check, and use of all-purpose words, in the post-speaking tasks. It should be noted that there were no changes in the rank order of six taught CSs: pause fillers and hesitation devices, approximation, self-repair, topic avoidance, clarification request, and comprehension check. These findings indicated that after the 10-week CS instruction the students had more confidence in using more taught CSs. The explicit teaching of the 10 CSs raised the students' awareness of the use of CSs when encountering communication difficulties. This view is supported by Nakatani (2010) and Mariani (2010). According to Nakatani (2010), the training emphasizing conscious practice in using CSs appeared to improve the students' communication during the stimulated tasks. In addition, Mariani (2010) also supported the idea that the students should use CSs in a confident way and that CS instruction should include awareness raising concerning the rationale for strategy use.

In terms of non-taught CSs, the findings suggest that the CS instruction might have had a negative influence on the non-taught CSs since there were also substantial changes in the frequency and rank order of these strategies, i.e. non-linguistic strategies, code switching, and message abandonment. It should be noted that message abandonment was not used by the students in the post-speaking tasks. It is possible that the students became more familiar with using various CSs so they had more choices of CSs to use. The decrease in using non-taught strategies was in line with the studies of Lam (2004) and Kongsom (2009), which revealed that the decreases in the students' use of non-taught CSs might have derived from the instruction and awareness raising regarding CSs.

Research question 3: *Does the instruction of specific CSs improve the students' level of strategic competence regarding the speaking tasks?*

After receiving the 10-week CS instruction, the students' level of strategic competence increased in the post-speaking tasks. That is, the students' strategic competence improved in all five strategic competence components. In particular, the students' strategic ability in the "use of verbal communication strategies" was at an extensive level, which indicated that the students could extensively use verbal communication strategies to express their ideas when facing communication problems. This result is in line with the findings regarding speaking task performance, which showed that the students increased their use of some taught CSs, e.g., "pause fillers and hesitation devices," "approximation," and "circumlocution." All of these CSs are verbal communication strategies that the students used to solve their communication difficulties. This view is in line with the concept of strategic competence mentioned by Saif (2002). That is, the ability in the "use of verbal strategies" involves "the extent to which the learners use of verbal communication strategies (e.g., paraphrase, circumlocution…) either to make their point more forcefully or to overcome possible linguistic gaps" (Saif, 2002:166). It is possible that the improvement in the students' strategic competence was associated with the instruction of the 10 taught CSs. After learning and practicing the use of these CSs, the students were more confident and became familiar with the use of all of these strategies.

In addition, the findings from the assessment of the students' level of strategic competence showed that their ability level in "goal setting" and "achievement of communicative goals through production" was moderate, which suggested that the students could moderately identify their goals for chosen tasks as well as decide whether to attempt the task or not, and they exhibited a moderate ability to use appropriate CSs for expressing their ideas to achieve their communicative goals. As shown in the speaking task performance, the students' ability in "goal setting"

was rather limited since they tended to talk less and gave up talking when they did not want to attempt the task. This view is in line with Bachman and Palmer's (1996) view on goal setting in strategic competence. That is, language learners decide what they are going to do with the chosen tasks. They may identify and choose one or more tasks and then decide whether they are going to complete them or not (Bachman and Palmer, 1996).

In terms of the "achievement of communicative goals through production," the findings showed that the students had a moderate ability in applying CSs for expressing their thoughts to achieve communicative goals. According to Saif (2002), the ability to achieve communicative goals through production can be assessed according to the learners' ability to match their "communicative goals and linguistic devices at their disposal for the purpose of production" (p.166).

Regarding strategic ability in the "use of non-verbal communication strategies," the findings revealed that the students had a limited ability in using non-verbal communication strategies. These results are in line with the results of the speaking task performance of this study, where the findings showed that the students less frequently used non-verbal communication strategies to solve their communication problems. One possible reason is that the non-verbal communication strategies might be useful if the students use them to supplement their verbal language. When the students learned more verbal CSs, they might have relied more on the use of certain verbal CSs.

With respect to the "achievement of communicative goals through comprehension," the findings showed the students had limited ability in understanding and interpreting the verbal/non-verbal language of the input by using certain cooperative strategies. As suggested by the analysis of the pre-speaking tasks of this study, the students appeared to less frequently use some cooperative or interactional strategies, such as appeal for help, comprehension check, and clarification request. It is possible that the types of speaking tasks might have had an influence on the types of CSs used since the students completed two descriptive

tasks and two interactive tasks in this study. Therefore, the students had less chance to use some of the cooperative or interactional strategies. This view is supported by Lee (2004) when she maintained that convergent tasks promote the use of checks, requests, and paraphrase more than divergent tasks, although both tasks encourage two-way communication.

Implications of the Study

Based on the findings of the present study, some implications can be drawn. In terms of curriculum development and syllabus design, this study provides an alternative approach to developing students' speaking ability. Incorporating CS training in a communicative syllabus or the foreign language curriculum can be beneficial since strategic competence and CSs help students cope with their communication problems. Practitioners may apply the findings of this study as a basis to design and develop lessons for enhancing students' strategic competence and CS use. Moreover, the systematic steps for CS practice and exercises developed in this study can be directly applied in the real classroom context.

As regards material development, teachers can use some of the lists of CSs, class activities, and training materials contributed by this study as a guideline in teaching different types of CSs to their students in an English speaking course.

Finally, the findings of this study suggest that students' strategic competence can be developed by raising their awareness and by training them to use CSs when encountering communication problems. In this study, the students' strategic awareness was raised through explicit CS instruction. To teach CSs, the definition and concept of the target strategy are introduced. Then, the students have their awareness of strategy use raised by discussing why and how people use the strategy. Next, they are encouraged to take risks and use the strategy. After that, examples of the actual use of the strategy are provided and the students practice using it. Finally, they evaluate their strategy use at the end of the lesson.

Conclusion

The current study provides some evidence to support the potential benefits of the instruction of CSs. Despite the argument against the teachability of CSs, this study lends support to previous research on CS instruction and provides more empirical evidence that the instruction of CSs is possible and desirable among second or foreign language learners. The teaching of specific CSs might help to develop students' strategic awareness and strategic competence and solve their oral communication problems. However, there were some limitations in the current study. First, the sample size of this study was rather small. Therefore, a larger sample of participants for the questionnaire and speaking tasks is recommended in further studies. Secondly, due to time constraints, the CS instruction of this study took only 10 weeks and the lesson for each CS lasted 60 minutes. Thus, a longer period of CS instruction is needed in future studies as changes in the students' strategic competence can be better investigated in a longitudinal study. Thirdly, this study emphasized the relationship among the students' self-perceived use of CSs, their actual use of CSs in the task performance, and their improvement in strategic competence. It seems necessary for future research to investigate the relationship between students' speaking ability and their use of CSs. Lastly, due to the limited scope of this study, the data from retrospective verbal reports were not investigated. Such retrospective verbal reports would be useful in order to elicit more evidence on the students' actual use of CSs in future studies.

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Appendix

Rating form for assessing the students' level of strategic competence in oral communication

Name:.....

Directions: Put a √ in the rate box below according to the students' level of strategic competence in oral communication:

Strategic competence component	**None** 0	**Limited** 1	**Moderate** 2	**Extensive** 3	**Complete** 4
1. Goal setting Identify the goals of the chosen task and then decide whether to attempt the task or not.					
2. Use of verbal communication strategies Use verbal communication strategies (e.g., circumlocution, approximation, appeal for help, pause fillers and hesitation devices) to express the intended meaning or to solve linguistic gaps.					
3. Use of non-verbal communication strategies Use non-verbal communication strategies (e.g., mime, gestures) to help express the intended meaning.					
4. Achievement of communicative goals through production Use appropriate communication strategies for expressing the intended meaning to achieve communicative goals.					
5. Achievement of communicative goals through comprehension Understand and interpret the verbal/non-verbal language of input by using some cooperative strategies (e.g., appeal for help, clarification request, comprehension check or gestures).					