Communication Apprehension in L1 and L2 of Engineering Students in a Unique Program in Thailand

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Abstract

As in any other subjects at university, students in English classes must engage in face-to-face communication with teachers, friends, university staff members and many others in order to acquire knowledge and information, as well as to help them reach their goal of educational success. However, according to McCroskey (1977), high levels of communication apprehension (CA) may prevent students from achieving their goals or make it more difficult. In this study, CA of first-year students was investigated by distributing the PRCA-24 (McCroskey, 1977) to 90 students in a special engineering program in a leading public university in Thailand. Moreover, *t*-tests were applied to compare the CA levels when students use Thai to their CA levels when they use the English language. The results reveal that CA in L1 was higher than CA in L2 when the students anticipated or imagined that they had to communicate in a meeting.

Keywords: Communication Apprehension (CA), engineering students, English classes, PRCA-24 in Thai

Introduction

Background

For approximately three decades, communication apprehension constructs have been used as variables in research conducted in many countries. Thus, the decision was made to conduct a research study on CA among engineering students at a public university in Thailand. This special program combines the discipline of engineering with the discipline of business management. The Thai language is used for all the subjects in the program including the courses of the English language.

Because CA levels play a vital role in many aspects of people's lives, knowing CA levels in the LI and L2 of students is very useful. Firstly, the research results may be beneficial for the teachers of the students in this unique engineering program, especially the English language teachers. Secondly, students may be better able to understand their communication apprehension when they use L1 and L2. In addition, in the future, more research may be done on CA in students in various faculties and departments of the university. Most importantly, this research study is the first to compare CA in L1 and L2 among university students in Thailand.

Statement of the Problem

There have been a vast number of studies conducted on Communication Apprehension (CA). However, there have not been any studies in the context of EFL in Thailand. Therefore, the researcher was encouraged to examine the level of the trait-like CA of students in an engineering program in a prestigious university in Thailand when they use the Thai language (L1) compared to CA when they use the English language (L2).

Research Questions

The research questions that guided this study were the following:

1. What are the CA levels of the engineering students in this unique program when they use L1 and L2?

2. Is there any difference between the CA levels of the engineering students in this unique program when they use L1 and L2?

Review of Literature

Definition of Communication Apprehension

Communication Apprehension (CA) is an individual's level of fear or anxiety associated with real or anticipated communication with another person or persons (McCroskey, 1970, 1976, 1977, 1984). Trait-like CA is an individual's orientation toward communication across varied contexts and situations. McCroskey and Beatty (1998) suggested that trait-like CA is rather enduring. Trait-like CA is a "predisposition to avoid communication if possible, or suffer from a variety of anxiety-type feelings when forced to communicate" (McCroskey, Daly, and Sorensen, 1976, p. 376).

Trait-like CA is a summary of the level of CA in four varied contexts and situations: group discussions, meetings, interpersonal conversations, and public speaking. Those with trait-like communication apprehension have a tendency to be anxious toward oral communication in all kinds of situations.

Causes of Communication Apprehension

While communication is essential, people nonetheless have different points of view toward it. CA is an internal, cognitive state centered on the fear of communicating (McCroskey and Beatty, 1998). McCroskey (1982) and Richmond and McCroskey (1998) revealed that trait-like CA has its roots in both genetics and the environment. They pointed out that children are born with certain personality predispositions and CA levels may be determined by how their parents respond to these tendencies. Opt and Loffredo (2000) also indicated that CA is an inherited trait.

Sources of CA differences are age, sex, and disparities in identified abilities (Butler, Pryor, and Marti, 2004). According to Alley-Young (2005), CA levels are affected by individual, social, cultural, and socio-economic factors. Buss (1980) revealed that CA arises from the newness of a situation.

Effects of Communication Apprehension

Scholars have found that high CA levels have negative effects on those with high communication apprehension. McCroskey & Beatty (1998) revealed that high CA interferes with communication competence and communication skill development, and also has negative effects on those with high CA levels in terms of their affect. This is because people with high CA tend to get less practice in communication and interpret the results of their attempts in a negative way.

Generally, in terms of learning, people with high CA do not perform well. McCroskey (1984) found that academic achievement and CA are inversely related. According to McCroskey, Richmond, Daly, and Cox (1975), those with high CA are perceived as less interpersonally attractive than those with low CA.

CA Measurement

In regard to measuring CA, the PRCA-24 (McCroskey, 1977, and 1982) is the most commonly used instrument. It is a personal report of communication apprehension in the form of a questionnaire composed of 24 items, which is designed to provide an indication of the fear or anxiety an individual feels when communicating orally in four contexts: group discussions, meetings, interpersonal conversations; and public speaking.

Scores for each context can range from 6 to 30. Any score above 18 indicates some degree of apprehension in that context. The total level of trait-like CA is identified when the scores from all contexts are summed up. The PRCA-24 scores of individuals range from 24-120. Any score above 72 indicates a high level of CA (McCroskey, 1982).

Related Studies

Richmond et al (2008) and McCroskey et al (1983) indicated that students' levels of CA in L1 are significantly lower than their levels of CA in L2. The research study of Mohamad & Wahid (2009) revealed that one source of students' anxiety in English classes is the various kinds of evaluations of their knowledge and performance in English. In the study of Wörde (2003), students cited the factors that they believed arouse their anxiety as follows: native speakers, inability to comprehend, negative classroom experiences, speaking activities, fear of negative evaluation, pedagogical practices, and the teachers themselves.

Methodology

Subjects

This research was undertaken with students in an engineering program at a public university in Bangkok, Thailand. The participants in this study were first-year students. This target group was chosen for two reasons. First of all, it was convenient to gather data, as the researcher has been teaching English foundation courses for this engineering program for many years. Secondly, this special program combines the discipline of engineering with the discipline of business management. All the classes, including the English foundation courses taught in this program, are conducted in the Thai language.

The sample in this study was comprised of 90 first-year Thai students in this unique engineering program who were taking an English foundation course. They were from all three classes of the English foundation courses offered in the second semester of the academic year 2013, which lasted from November 2013 to the beginning of March 2014. The average number of students per class was 30. The number of participants was 61, comprised of 35 males and 26 females.

Research Tools

This study was a quantitative research study. The instrument employed was a questionnaire containing three parts: (1) demographic data; (2) the PRCA-24 in L1; and (3) the PRCA-24 in L2. The PRCA-24 (McCroskey, 1977) is the most widely accepted tool for measuring communication apprehension (CA) in people.

The PRCA-24 used in the study was translated into the Thai language and the construct validity when used with Thai people has already been verified (Rimkeeratikul, 2008) (see the Appendix). The PRCA-24 is a personal report of Communication Apprehension composed of 24 items asking how an individual feels when they perform or think of performing oral communication in four dimensions: group discussions, dyadic conversations, meetings, and public speaking.

Procedures

In the last week of the semester, the researcher asked for cooperation from the English language lecturers of the other two classes and explained the nature of the study to the participants. Self-administered questionnaires were distributed to 90 students in the three classes of the same foundation English course on the same day at the same time.

In the instructions explaining how to complete the questionnaires, there is a sentence stating that the students have the right to either give answers or abstain from doing so. After the data collection process was finished, 61 questionnaires were completed and returned, representing a 67.8% rate of return.

Data Analysis

Descriptive statistics, such as means and standard deviations, were calculated for the general background of the respondents. In addition, the CA scores of the students of this unique engineering program were calculated from the PRCA-24 in order to determine their levels of communication apprehension (CA) when they use the Thai language and the English language.

The mean scores of CA were calculated when they use the Thai language (CA in L1) and when they use the English language (CA in L2) in four dimensions: group discussions, dyadic conversations, meetings, and public speaking. In addition, *t*-tests were computed to find out whether there were any significant differences between CA in L1 and CA in L2 among the engineering students in this unique program. The significance level was set at $p<.05$ in this study.

Results

As shown in Table 1, the overall mean score of total CA when using the Thai language of the participants was 71.6, which is a moderate level of CA. According to

McCroskey (1982), CA scores range between 24-120 points. Scores above 72 indicate that one is generally more apprehensive about communication than the average person, while scores above 85 indicate a very high level of trait-like communication apprehension. Scores below 59 indicate a very low level of apprehension. Extreme scores (below 59 or above 85) are abnormal (p. 24).

Across the four categories of CA, all of the average scores were moderate. According to McCroskey (1982), scores in the four contexts (groups, meetings, interpersonal conversations, and public speaking) can range from a low of 6 to a high of 30. Any score above 18 indicates some degree of apprehension.

Table 1. CA in L1

	N	Minimum	Maximum	*Mean*	*SD*
Group Discussions	61	11.00	21.00	16.95	2.01
Meetings	61	11.00	22.00	18.24	2.01
Interpersonal Conversations	60	12.00	23.00	18.25	1.95
Public Speaking	61	12.00	27.00	18.13	2.26
Total CA	60	51.00	82.00	71.60	4.98

Table 2 shows the mean scores of total CA across dimensions when using the English language. The overall mean score of the total CA of the participants was 70.8, indicating that the respondents' overall level of CA was moderate. Also, for the four categories of CA, all of the average scores for all the dimensions were moderate.

Table 2. CA in L2

	N	Minimum	Maximum	*Mean*	*SD*
Group Discussions	61	11.00	21.00	17.26	1.74
Meetings	61	11.00	21.00	17.62	2.73
Interpersonal Conversations	60	14.00	23.00	17.75	1.79

	N	Minimum	Maximum	*Mean*	*SD*
Public Speaking	61	12.00	27.00	18.13	2.26
Total CA	61	51.00	83.00	70.77	4.79

In order to find out whether there is any difference between CA levels of the engineering students in this unique program when they use L1 and L2, the researcher opted for independent sample *t*-tests as the statistical tool. The *t*-test analyses were conducted with the scores of CA in L1 and L2 in the four dimensions. Then, the means of the total CA scores in L1 and L2 were compared through further *t*-test analysis.

Table 3 indicates that there was no difference in the level of CA scores among students in this engineering program when they use or anticipate that they will use L1 and L2 for group discussions.

Table 3. Paired sample *t*-test CA in L1 and L2 in Group Discussions

	Paired Differences							
	Mean	*SD*	*Std. Error Mean*	Lower	Upper	*t*	*df*	Sig. (2 tailed)
Thai English	-.31148	2.39820	.30706	-.92568	.30273	-1.014	60	.314

(*p*< 0.05)

On the other hand, Table 4 exhibits that the CA scores among students in this engineering program were different when they use or anticipate that they will use L1 and L2 for meetings.

Table 4. Paired sample *t*-test CA in L1 and L2 in Meetings

	Paired Differences							
	Mean	*SD*	*Std. Error Mean*	Lower	Upper	*t*	*df*	Sig. (2 tailed)
Thai English	.62295	1.99302	.25518	.11251	1.13339	2.441	60	.018*

(*p*< 0.05)*

Table 5 indicates that average CA among students in this engineering program was at a higher level in L1 in the dimension of meetings than the average CA level in L2.

Table 5. Paired Sample Statistics of CA in L1 and L2 in Meetings

Paired Sample Statistics			
	Mean	*N*	*Std. Deviation*
Thai	18.2459	61	2.01375
English	17.6230	61	1.73363

Table 6 shows that there was no difference in the level of CA among students in this engineering program when they use or anticipate that they will use L1 and L2 for interpersonal conversations.

Table 6. Paired sample *t*-test CA in L1 and L2 in Interpersonal Conversations

	Paired Differences							
	Mean	*SD*	*Std. Error Mean*	Lower	Upper	*t*	*df*	Sig. (2 tailed)
Thai English	.46667	2.45272	.31664	-.16694	1.10027	1.474	59	.146

($p< 0.05$)

As shown in Table 7, paired sample *t*-tests could not be conducted because of the fact that the mean value and standard deviation of CA in L1 and those of L2 in public speaking were exactly the same.

Table 7. CA in L1 and L2 in Public Speaking

Paired Sample Statistics			
	Mean	*SD*	*Std. Error Mean*
Thai	18.1311	2.26182	.28960
English	18.1311	2.26182	.28960

($p< 0.05$)

Table 8 indicates that the mean score of the participants' total CA when using the Thai language was 71.6, which is a moderate level of CA. Also, the CA of the engineering students when using the English language was 70.82, which is a moderate level.

Table 8. Total CA in L1 and L2
($p< 0.05$)

Paired Sample Statistics

	Mean	*SD*	*Std. Error Mean*
Total CA Thai	71.60	4.92	.63611
Total CA English	70.82	4.81	.62141

The paired sample *t*-test in Table 9 indicates that there was no statistically significant difference between the mean of the total CA scores when the students use the Thai language and the mean of the total CA scores when they use the English language.

Table 9. Paired Sample *t*-test in Total CA in L1 and L2

	Paired Differences							
	Mean	*SD*	*Std. Error Mean*	Lower	Upper	*t*	*df*	Sig. (2 tailed)
Thai (L1) English (L2)	.78333	4.15420	.53630	-.28981	1.85648	1.461	59	.149

Discussion

Total CA in L1 and L2 among the engineering students

Based on the results from the PRCA-24, the average scores of the total CA in both L1 and L2 of the engineering students in this unique program indicated an average level of CA. The results from *t*-test analyses indicated no differences in trait-like CA among the engineering students of this program when they communicated in Thai or English. In addition, the results showed that there was not a statistically significant difference between the CA levels among the engineering students in this

program with respect to three of the dimensions: group discussions, meetings, and public speaking. However, a difference was found in the CA level in the dimension of meetings; the CA in L1 was higher than CA in L2 when the students anticipated or imagined that they had to communicate in a meeting. The results contrast the findings in the studies of Richmond et al (2008) and McCroskey et al (1983), in which the CA levels in L1 were lower than those in L2.

This might lead to the conclusion that the students of this engineering program felt relaxed in their English classes. They also did not experience a significant degree of stress when they imagined using English across situations. However, students may not have had real experience in any actual meeting situation, and thus may have responded to the questionnaire (PRCA-24) using their imaginations. This may suggest that the students were more relaxed when learning English as compared to when they study more difficult subjects such as physics or mathematics.

Summary and Conclusion

The current study aimed to determine the CA levels of engineering students in a unique engineering program at a public university in Thailand through administering McCroskey's PRCA-24, which was translated into the Thai language. Construct validity was shown to be retained when the test is used with Thai people in Bangkok (Rimkeeratikul, 2008). In this study, the students' CA levels when using Thai and English did not differ to a statistically significant degree for most dimensions, except for the dimension of meetings.

Recommendations for Further Research

The recommendations for further research are presented as follows:

1. Qualitative methodology should be applied in further research studies in order to obtain more insight into the underlying reasons for students' communication apprehension when they use Thai and English in various situations. Such qualitative data may be derived from interviews and observations.
2. Future studies may investigate CA in L1 and L2 of students in another engineering program at the same university, so that CA in L1 and CA in L2 of engineering students of different programs can be compared and contrasted.
3. Future studies should include more related variables such as test anxiety or willingness to communicate (WTC) in order to obtain more information about the factors that enable students to be more effective in learning the English language.

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