COMMUNICATION STRATEGIES OF ENGINEERING STUDENTS AT A PRIVATE UNIVERSITY INSTITUTE IN BANGKOK IN THE ACADEMIC YEAR OF 2015

Supatsorn Jindathai

College of General Education and Languages
Thai-Nichi Institute of Technology
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ABSTRACT

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The objective of this study is to investigate which communication strategies (CSs) are most frequently used by first-year engineering students at Mahanakorn University of Technology (MUT), and Thai-Nichi Institute of Technology (TNI) recognised as private university institutes in Bangkok. It also aims to examine the differences of the use of CSs according to gender, high school background, and self-perception of English speaking ability of the participants. An adopted Metcalfe and Noom-Ura's Oral Communication Strategy Inventory (OCSI) (2013) was employed to collect quantitative data from 361 first-year engineering students whose age ranged from 17 to 29 years during the first semester in the academic year of 2015. Stratified random sampling technique was applied to select participants. Statistics used for analysing the data were frequency, percentage, mean, standard deviation, t-test, F-test or ANOVA, and Scheffe test. The results of this study show that the use of overall oral communication strategies was at a moderate level of use. The students' most frequently used speaking strategies were message reduction and alternation whereas the least frequently used strategies were accuracy-oriented. As for listening strategies, the most often used strategies were negotiating of meaning whilst listening strategies; on the other hand, the least frequently used strategies were fluency-maintaining. In addition, the overall use of speaking and listening strategies reported by male engineering students and their female counterparts showed no significant difference. Additionally, there were no significant differences in the overall use of speaking and listening strategies among the engineering students with different high school background; however, a significant difference was found at an individual level of oral communication strategies. Finally, there was a significant difference in the overall use of oral communication strategies among the students with different levels of self-perception speaking ability. Students with good self-perception reported using some oral communication strategies more significantly different than did their poor counterparts.

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Supatsorn Jindathai

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Introduction

1.1 Rational of the Study

In the era of globalisation, English is perceived as one of the world's dominant languages for conducting international trade, developing and transferring new modern technology, and exchanging breakthrough scientific discoveries. Therefore, language learners in any study field need to integrate their language abilities and specialised knowledge in order to obtain better career opportunities. In the field of engineering English plays a vital language communication bridge in international engineering projects which two parties are interacting with different native languages (Riemer, 2002). Ability to convey messages effectively and professionally are crucial during the course of communication, not only syntactical knowledge and lexical in engineering field but also appropriate discourses in exchanging views or negotiating environments (Wells, 1985:22). In addition, they must respond appropriately and intelligibly with minimal hesitation to achieve their communication objectives (Alderson and Bachman, 2004: ix). Many researchers and journalists concluded that some Thai students, including engineering students, lacked linguistic and communicative competence in order to maintain oval communication with interlocutors (Draper, 2012; Foley, 2005; Kirkpatrick, 2012; Methithan and Chamcharatsri, 2011). They also lacked self-confidence in interacting with native or non-native speakers (Jindathai, 2015; Kongsom, 2009; Toosiri, 2005). In real-life communicative situations, language learners often face difficulties in retrieving a intended word or expression, or comprehending the topic they are talking with interlocutors; as a result, a communicative goal breaks down (Willems, 1987).

The term "communication strategies" are generally defined as problem solving devices which language learners employ when facing linguistic difficulties in oral communication with interlocutors in the target language. According to Canale (1983: 10) CSs refer to "verbal and non verbal strategies that may be called into action to compensate for breakdowns in communication due to limiting conditions in actual communication or to insufficient competence in one or more other areas of communicative competence, and to enhance the effectiveness of communication".

Similarly, Tarone (1983:62) suggests that "the term CSs relates to a mutual attempt of two interlocutors to agree on a meaning in situations where requisite meaning structures do not seem to be shared." During the past decades, several experts such as (Bialystok, 1990; Dörnyei, 1995; Faerch, and Kasper, 1983; Willems, 1987) have suggested language learners to develop these language devices, or communication strategies which enable them to cope with their language deficiency, and enhance communication effectively.

As for CSs research in Thailand, several researchers focused on investigating the frequency of CS use of undergraduate students with English majors such as Metcalfe and Noom-Ura, 2013; Phothongsunan, 2010; Somsai, 2011. Some researchers also investigated variables which affected the use of CSs such as level of proficiency, task types, and gender (Chuanchaisit and Prapphal, 2009; Somsai, 2011; Metcalf and Noom-Ura, 2013). After a review of the relevant literature an empirical research conducting in the field of CSs with engineering students at a private university institute to examine the differences of students' gender, high school background, and self-perception in speaking ability is scarce. For this reason, the practitioner aims to identify useful CSs which may help Thai learners to increase their communicative competence and investigate these variables may affect their choice of CS use. These research results could use as insight in the use CSs for instructors at these institutions to assist students to overcome speaking difficulties and eventually improve their communicative competence.

This present research attempts to answer the following questions.

1. What kinds of communication strategies are used by first- year engineering students at a private university institute?

2. Are there any differences in the use of communication strategies between male first-year engineering students and female counterparts?

3. Are there any differences in the use of communication strategies employed by first-year engineering students with different high school background?

4. Are there any differences in the use of communication strategies employed by first-year students with a different level of self-perceived speaking ability?

1.2 Background of Private University Institutions

Private University Institutions, or an official name, Private Higher Education Institutions are under the supervision of Office of Higher Education Commission (OHEC), Ministry of Education. With higher demands of high school students who were seeking to further their higher education in Private Higher Education Institutions, there are forty-one private institutions were located in Bangkok (Sattayawaksakul, Putsom and Keawduang, 2013). Each institution presented their philosophies, commitments and objectives. During the past decades, three private universities and one private institution have confirmed and dedicated one of their main objectives to provide education at an undergraduate level focusing on promoting science and technology, especially in the engineering fields since at the beginning of their operation until present time. These institutions include Mahanakorn University of Technology (MUT), Siam University (SU), Southeast Asia University SAU), and Thai-Nichi Institute of Technology (TNI). MUT and TNI were purposively selected for this present study. Background of MUT and TNI and their English language teaching and learning is shown as follows:

English language learning and teaching at Mahanakorn University of Technology, MUT provided English as a foreign language to engineering students as compulsory and elective courses for both English program and non-English major students. The group of students for this present study was non-English major. These students were required to enroll five compulsory English subjects: Fundamental English (ENGL1101), Fundamental English for Academic Purposes (ENGL1102), English for Future Careers (ENGL1308), Fundamental English Communication (ENGL2101), English Communication in the Workplace (ENGL2102). After that they could enroll for one elective English subject. The total numbers of credits for the English subject course were 12 credits.

As for English language learning and teaching at Thai-Nichi Institute of Technology (TNI), English as a foreign language was provided to engineering students as compulsory and elective courses. All students were non-English major and required to take three compulsory English subjects: English for Communication 1(ENL-101), English for Communication 2 (ENL-102), English for Communication 3

(ENL-201). After that they could enroll for one elective English subject. The total numbers of credits for the English subject course were 12 credits.

1.3 Objectives of the Study

The objectives of the study are in the following section.

1. To identify types of communication strategies employed by first-year engineering students at a private university institute

2. To compare communication strategies according to students' gender, high school background , and self-perceived speaking ability

1.4 Research Questions

1. What kinds of communication strategies are used by first- year engineering students at a private university institute?

2. Are there any differences in the use of communication strategies between male first-year engineering students and female counterparts?

3. Are there any differences in the use of communication strategies employed by first-year engineering students with different high school background?

4. Are there any differences in the use of communication strategies employed by first-year students with a different level of self-perceived speaking ability?

1.5 Theoretical Perspectives

Nakatani's (2006) Oral Communication Strategy Inventory (OCSI) was originally developed in Japan. His original questionnaire consisted of 15 taxonomies of communication strategies containing eight strategies which a learner applies when facing speaking difficulties and consisting of seven strategies which are used for overcoming listening problems. The important feature of Nakatani's OCSI, which contains speaking and listening factors, reflects the interactive nature of oral communication in a foreign language. This feature is non-existed in any other communication taxonomies. Nakatani's original inventory has been widely utilisesd in many studies across different countries such as Chen, 2009; Chiang, 2011; Huang, 2010; Metcalfe and Noom-Ura, 2013; Li, 2010; Mirzaei and Heidari, 2012; Teng, 2011.

Metcalfe and Noom-Ura (2013) adopted the original version of Nakatani's (2006) OCSI. Circumlocution strategies, which are commonly used in all of the major taxonomies, were added in the speaking part. This makes nine communication strategies in this part. Scanning strategies were deleted from the listening part so there were only six communication strategies in this listening part. Consequently, the final adapted version contains 15 taxonomies of communication strategies which are shown in the following section.

1.6 Conceptual Framework of the Study

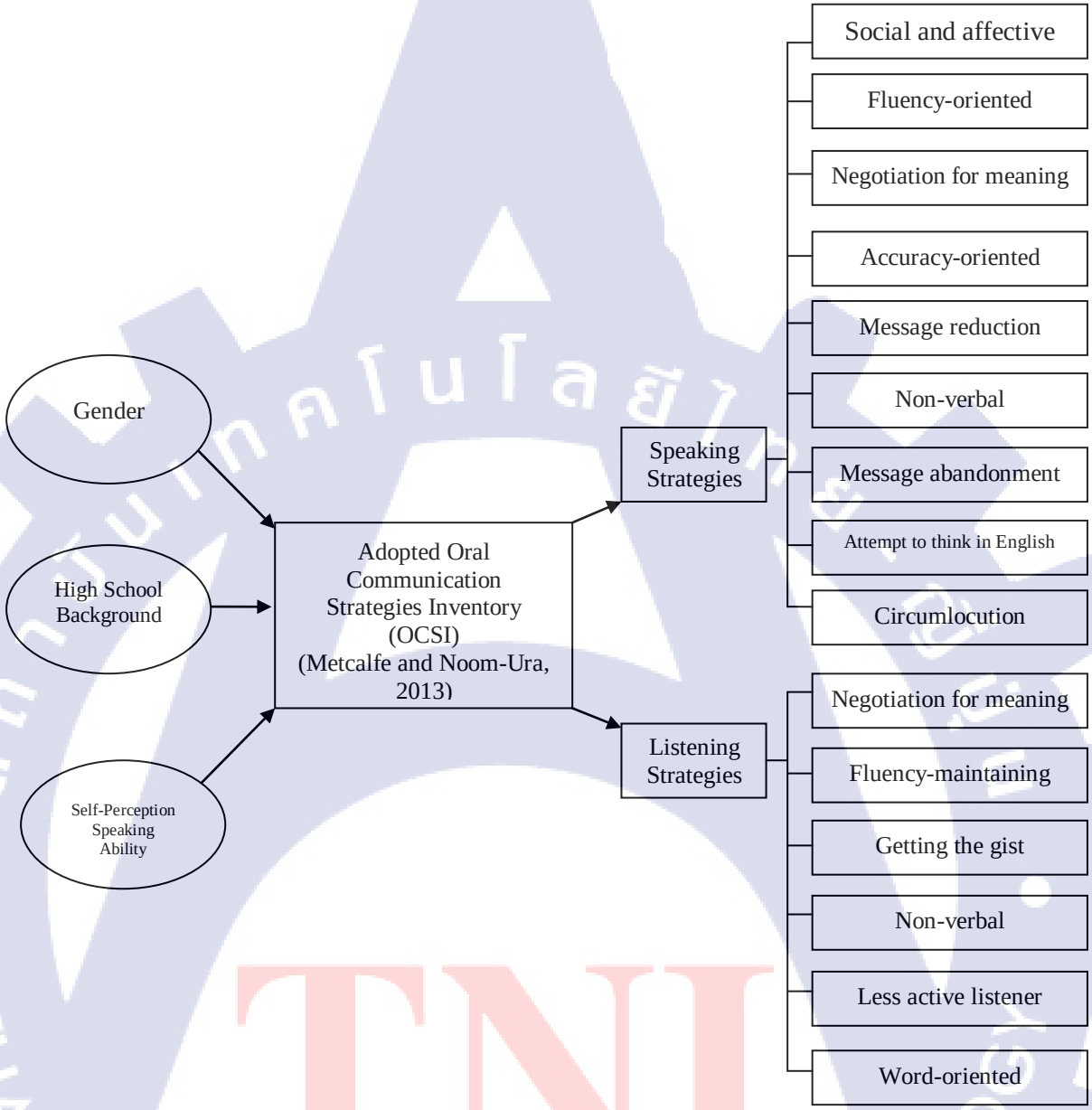

Figure 1.1: Conceptual Framework Diagram

1.7 Definitions of Terms

Communication strategies

The term "communication strategies" refers to language techniques used by language learners in an attempt to overcome problems in expressing their intended meaning to listeners due to linguistic deficiency, or to enhance the effectiveness of oral communication (Somsai, 2011).

Oral Communication strategies inventory

Oral communication strategies inventory was initiated by Nakatani (2006) as an instrument for assessing the frequency of communication strategy use by language learners. The inventory contained two sections – strategies for coping with speaking problems or speaking strategies, and strategies for overcoming listening difficulties or listening strategies.

Speaking strategies

Speaking strategies or strategies for coping with speaking difficulties refer to speaking techniques which a language learner employed in order to overcome speaking problems. They contain nine speaking strategies that are social and affective, fluency-oriented, negotiation for meaning whilst speaking, accuracy-oriented, message reduction and alteration, non-verbal, message abandonment, attempt to think in English, and circumlocution strategies.

Listening strategies

Listening strategies or strategies for coping with listening difficulties refer to listening techniques which a language learner employed in order to overcome listening problems. They consist of six listening strategies that are negotiation for meaning whilst listening, fluency-maintaining, getting the gist, non-verbal, less active listener, and word-oriented strategies.

High school background

The term "high school background" refers to the location of high schools where students attended before they entered their university level. It is divided into "*urban high schools*", "*suburbanised high schools*", and "*rural high schools.* "*Urban high schools*" refer to the schools which are located in Bangkok Metropolitan area. "*Suburbanised high schools*" refer to five provincial areas (or Parimonthon) surrounded the Bangkok Metropolitan area, that are Nonthaburi, Pathum Thani, Samut Prakan, Nakhon Pathom, and Samut Sakhon. Lastly, "*rural high schools*" refer to 70 provinces outside Bangkok Metropolitan areas and Parimonthon.

Self-perceived speaking ability

The term "self-perceived speaking ability" refers to students' perception about their English speaking ability level based on their self-evaluation which was divided into three levels: good, moderate, and poor.

1.8 Scope and Limitations

Participants of this study consisted of first-year engineering students who were taking their first compulsory English subject in the first semester of the academic year of 2015 from two private university institutes - Thai-Nichi Institute of Technology (TNI), and Mahanakorn University of Technology (MUT). The limitations that could influence this present study could possible be as follows:

1. The investigation was conducted with only first-year engineering students who were studying at two private university institutes. The generalisations of the study may be suitable for students who are studying in the same field of study and at the same type of institute.

2. This present study was restricted to only one type of data collection which was a distribution of questionnaires. Therefore, if other type of data collection was used along side with the questionnaire, such as a role-play task, a speaking task, or a interview. The results of the participants' choice of communication strategy use might be more accurate and may reveal different results.

1.9 Significance of the Study

This present investigation is useful and important for language instructors and learners in increasing better understanding of how to use communication strategies in an attempt to overcome language deficiency of lexical and discourse knowledge while having oral interacting with interlocutors. Language instructors may gain better understanding in the use of learners' communication techniques in communicating in English inside and outside classroom setting. The new insight in the use of CSs can also help language instructors to improve their oral communication techniques and teaching styles in order to assist their students to become successful and effective communicators. As for language learners, they may gain higher knowledge of CSs and can apply appropriate and better communication techniques to overcome their deficiency in oral communication ability and to improve the effectiveness of communication.

CHAPTER II

REVIEW OF LITERATURE

2.1 Historical Overview of Communication Strategies

The study of communication strategies was introduced in the 1970s by four important researchers: Selinker (1972), Savignon (1972), Váradi (1973), and Tarone (1977) in the field of apply linguistics. Selinker (1972) published the paper entitled "Interlanguege" and introduced the notion of communication strategies for the first time. In the same year Savignon (1972) conducted pedagogical research aiming at investigating the use of CSs in training students. Later the empirical and systematic studies of CS were introduced by Váradi (1973), and Tarone (1977).

During the past three decades, the expansion of CSs in the field of a second language learning is due to the work of Canale & Swain (1980) and Faerch & Kasper (1983). The famous framework of Canale & Swain (1980) involves learners' abilities to apply problem-solving devices in order to solve communication difficulties due to lack of linguistic knowledge. Several experts and researchers conducted CS research by studying relationship between CS use and learners' factors such as proficiency levels (Bialystok ,1983; Poulisse & Schils, 1989; Dörnyei, 1995; Nakatani, 2006; Nakatani, 2010); task types (Poulisse & Schils, 1989; Flyman, 1997; Smith, 2003). Some researchers applied experiment research to investigate CS use through training and teaching learners (Dörnyei, 1995; Brett, 2001, Nakatani, 2005; Lam, 2006).

2.2 Important of Communication Strategies in Enhancing Communication Abilities

The aim of most second or foreign language learners is to communicate effectively. However, some of them cannot master the language and find it difficult to communicate in the target language. They may lack a word, an idiom, a phrase, a structure, a tense marker to convey the message across (Bialystok, 1990). How do the learners cope with their linguistic knowledge deficiency? They may attempt to use their hands, mix L1 and L2, create new words, or describe or circumlocute something

they do not know the word. In other words, they apply CSs to solve their oral communication difficulties in order to reach a communication goal (Dörnyei, 1995).

In addition, several experts (such as Canale (1983); O'Malley and Chamot (1990); Tarone (1981) assert an important of CSs for second or foreign language learners. Language learners could apply CSs for two main purposes. The first one is to overcome speaking difficulties in convey a message. These CSs are crucial at the beginning stages of second or foreign language learning (Terrell, 1977). The second aim of using CSs is for learners with higher levels. They apply CSs to maintain and improve the effectiveness of communication (Canale, 1983).

2.3 Conceptualisation of Communication Strategies

Over the past decades, several definitions of CSs have been proposed by scholars such as Tarone (1977, 1980); Canale (1983); Faerch & Kasper (1983); Bialystok (1990); Dörnyei & Scott's (1997); Nakatani, (2005, 2006) but there has not been a final agreement on a single definition of CSs this is due to perception, beliefs, and range of strategies involved in their research. CSs are generally defined based on two main perspectives: the interactional view and the psycholinguistic view. The interactional view of CSs as proposed in Tarone's studies (1980:419) states that "a mutual attempt of two interlocutors to agree on a meaning in the situation where requisite meaning structures do not seem to be shared". Under this view, it implies that CSs are used as language tools when two interlocutors are trying to negotiate for meanings in the situation where unavailable communicate meanings are shared between two interlocutors. Other experts such as Canale (1983); Long (1983) Nakatani (2005, 2006); Nakatani and Goh (2007); Pica (2002); agree and support this interactional process. According to this view, a learner tries to negotiate for meanings with an interlocutor but due to their deficiency of language knowledge CSs are utilised in order to overcome their difficulties and communication breakdown. On the other hand, under the psycholinguistic view, researcher like Bialystok (1990); Faerch and Kasper (1983); Poulisse (1993) emphasises CSs as a cognitive process of a learner and focus on the learner's comprehension and speech production. According to Faerch and Kasper (1983: 36), CSs were considered as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular

communicative goal". The psycholinguistic view of Faerch and Kasper defines CSs in terms of a learner's mental response to lexical and discourse problems experienced by them during speech production without any support from the interlocutor for resolution.

2.4 Characteristics of Communication Strategies

Scholars offer various definitions for communication strategies; however, these definitions seem to share three characteristics: problematicity, consciousness, and intentionality. Problematicity refers to "the idea that strategies are used only when a speaker perceives that there is a problem which may interrupt communication" (Bialystok 1990:3). This criterion of problematicity has been included in definitions in most CS studies.

Consciousness refers learner's awareness to choose a strategy in order to convey messages and appears in many definitions of CSs. Experts such as Faerch and Kasper (1980); Dörnyei and Scott's (1997) include this criterion in their definitions. However, Bialystok (1990) claims that consciousness is implicit in the proposed definitions of CSs and finds no supported evidence to show that learners have an awareness of what kinds of strategy they have employed.

According to Bialystok (1990:5) intentionality refers to "the learner's control over a repertoire of strategies so that particular ones may be selected from the range of the options and deliberately applied to achieve certain results". This criterion shows the evidence that learners have control over the strategy use and make a choice from the range of strategies in order to achieve their communication problems.

2.5 Classifications of Communication Strategies

Over the past three decades, various taxonomies of CSs have been developed and proposed by several researchers in the field of CSs. Most literature on CSs provide taxonomies which are similar and overlap these may be divided into reduction or avoidance strategies, and achievement or compensation ones, such as Tarone, 1980; Faerch and Kasper, 1983; Dörnyei, 1995.

Dörnyei (1995), classified CSs into avoidance or reduction strategies, achievement or compensatory strategies, and stalling or time-gaining strategies. Avoidance or reduction strategies are identified as topic avoidance (or message reduction), and message abandonment (or message replacement). Achievement or compensatory strategies comprise circumlocution, approximation, use of all-purpose words, word coinage, use of non-linguistic means, literal translation, foreignising, code switching, and appeal for help. The last classification is stalling or time-gaining strategies or the use of fillers/hesitation devices.

Nakatani (2006) combines the features of reduction and achievement and develops the Oral Communication Strategy Inventory (OCSI). The Nakatani's OCSI comprises two parts: speaking strategies and listening strategies.

The first part refers to speaking strategies or strategies for dealing with speaking difficulties containing eight strategies shown as follows:

- Social-affective involves learners' affective factors in social context.

- Fluency-oriented relates to fluency of communication.

- Negotiation for meaning whilst speaking is relevant to learners' attempt to negotiate with interlocutors.

- Accuracy-oriented concerns with desire to speak English accurately.

- Message reduction and alternation involves avoiding a communication breakdown by reducing an original message or using a similar expression.

- Nonverbal strategies whilst speaking uses eye contact, gestures, or facial expressions to help listeners.

- Message abandonment associates with message abandonment

- Attempt to think in English involves thinking as much as possible in the target language during actual communication.

The second part contains listening strategies or strategies for coping with listening strategies comprising seven strategies

- Negotiation for meaning whilst listening involves negotiating behaviour whilst listening.

- Fluency-maintaining pays attention to the fluency of conversational flow.

- Scanning focuses on specific points of speech, such as subject and verb.

- Getting the gist pays attention to general information contained in speech

rather than specific utterance.

- Nonverbal strategies whilst listening makes use of nonverbal information, such as speakers' eye contact and gestures.

- Less active listeners translates the message into their native language little by little and depending on familiar words.

- Word-oriented pays attention to individual words.

Metcalfe and Noom-Ura (2013) combined Nakatani's (2006), Chuanchaisit and Prapphal' s (2009), and Chiang's (2011) inventories, and came up with a new classification which also contain two parts: strategies in coping with speaking difficulties, and strategies in dealing with listening difficulties.

In the first part, Metcalfe and Noom-Ura (2013) added circumlocution strategies which relate to learners' lexical compensation. This makes nine strategies relating to strategies in coping with speaking problems. These include in the following section.

- Social-affective strategies refer to affective factors of learners in social context.

- Fluency-oriented strategies relate to learners' fluency in communication.

- Negotiation for meaning whilst speaking strategies are relevant to learners' attempt to negotiate with interlocutors.

- Accuracy-oriented strategies concern with learners' desire to speak English accurately.

- Message reduction and alternation strategies refer to avoiding a communication breakdown by reducing an original message or using a similar expression.

- Nonverbal strategies whilst speaking strategies include eye contact, gestures, or facial expressions to help listeners.

- Message abandonment strategies associate with reduction of message.

- Attempt to think in English strategies involve thinking as much as possible in the target language during actual communication.

- Circumlocution strategies refer to describing the main characteristics or elements of the target word.

In the second part, Metcalfe and Noom-Ura (2013) deleted scanning strategies in Nakatani's OCSI (2006). The new classification contains six strategies referring to problems in dealing with listening shown as follows:

- Negotiation for meaning whilst listening strategies refer to negotiating behaviour whilst listening.

- Fluency-maintaining strategies relate to learners' attention to the fluency of conversational flow.

- Getting the gist strategies mean learners' attention to general information contained in speech rather than specific utterance.

- Nonverbal strategies whilst listening makes use of nonverbal information, such as speakers' eye contact and gestures.

- Less active listeners strategies refer to learners' translation of the message into their native language little by little and depending on familiar words.

- Word-oriented strategies mean learners' attention to individual words.

2.6 Relevant Research on Communication Strategies

2.6.1 Communication Strategies Research in Foreign Countries

Over the past decades, several research in foreign countries revealed diversified results of frequency of CS use this is due to different taxonomies employed. Nakatani (2006), Chen (2009), Huang (2010), Chiang (2011), Teng (2011) applied the Oral Communication Strategy Inventory (OCSI) based on Nakatani's, 2006. Their results showed that message reduction and alteration (renamed compensation by Chiang, 2011), non-verbal strategies while speaking, social affective, and negotiation for meaning while speaking appeared to rank in high speaking strategy use in most of these studies. As for the lowest frequent strategy used, their findings showed diversified results. Chen (2009); Huang (2010) reported message abandonment strategies as the least frequent speaking strategies in Taiwan. On the contrary, Nakatani (2006) reported this strategy use as the second most highly used speaking strategies of Japanese students. Regarding listening strategies, studies in Japan and Taiwan like Nakatani (2006); Chiang, (2010) reported using non-verbal strategies whilst listening, negotiation for meaning whilst listening, and word-oriented strategies as the most high listening strategy used.

Mei and Nathalang (2010) used Faerch and Kasper's (1983) taxonomy to collect data from Chinese undergraduate students. The results showed that 'paraphrase' was the most frequently used strategy whereas 'foreignising' was the least frequent strategy used.

Teng (2011) used Nakatani's OCSI to collect data from Taiwanese university students. The instruments consisted of Nakatani's questionnaire, a role play task, and an interview guide. The results show that the participants most frequently used strategy group were non-verbal strategies to overcome speaking problems whereas least often strategy group was accuracy-oriented strategies.

- **Communication Strategy Use and Gender**

Learners' gender is one of the variables that may influence the choice of CSs. Several researchers in the field of language learning strategies such as (Politzer, 1983; Ehrman and Oxford, 1989; Oxford and Nyikos, 1989; Green and Oxford, 1995; Williams et al., 2002) found relationship between gender and learning strategies. However, in the field of communication strategies, gender of learners had only minor relationship on the use of CSs (Huang, 2010; Bui and Intaraprasert, 2012; Zhao and Intaraprasert, 2013) while Kaivanpanah, Yamouty and Karami's (2012) study revealed no significant difference between students' gender, and the significant difference was reported at an individual strategy level. Due to different taxonomy applied their results were diversified. Li (2010); Bui and Intaraprasert's (2012); Zhao and Intaraprasert's (2013) study showed that a significant higher percentage of female students than their male peers reported using familiar words, using all-purpose words, using examples, thinking in their native language and then translating into English, asking the interlocutor to slow down, and asking the interlocutor to clarify unknown words. Kaivanpanah, Yamouty and Karami (2012) applied (Dörnyei and Scott's (1997) inventory. Their results revealed that female students reported using circumlocution, asking for clarification, omission, comprehension check, and using fillers significant higher than did their male counterparts.

- **Communication Strategy Use and Students' High School Background**

One variable which receives a little attention from researchers is learners' high school background. This variable may influence the choice of CSs. After an extensive review of relevant literature, empirical research investigated high school background of learners and the choice of CS use seem rare. Bui and Intaraprasert (2012) examined the relationship of this variable and the CS use of undergraduate students majoring in English in the south of Vietnam. The results found minor relationship; however, significant variations were found at an individual strategy level. The students with rural high school background reported use of CSs more frequent than did those with urban high school background.

- **Communication Strategy Use and Self-Perceived Speaking Ability**

Over the past decade, several researchers examined the influence of communication strategy use and actual learners' proficiency level (Nakatani, 2006, 2010; Chen, 2009; Li, 2010; Mirzaei and Heidari, 2012). Investigation on the relationship between learners' self-perceived speaking ability and the CS use was very few and their results showed diversify (Huang, 2010; Zhao and Intaraprasert (2013). Huang (2010) investigated an influence of students' self-perceived speaking ability and the use of CSs among Taiwanese university students. The results found a significant difference between students with different self-perceived speaking ability and overall strategy use. There were significant difference in social affective, fluency-oriented, and negotiation for meaning while speaking strategies. Zhao and Intaraprasert (2013) examined the effect of Chinese students' self-perceived speaking ability (good, fair, and poor) and the choice of the CS use. The finding showed that there was no significant difference of CS in overall use; however, the significant differences of CS use were found at individual items. There was significant higher percentage of students with good self-perceived speaking ability than students with fair self-perceived ability and than students with poor self-perceive ability (good > fair > poor) in using familiar words, phrases, or sentences, applying self-correction of utterances, using synonym and antonym, and applying self-correction of pronunciation, grammar, lexical mistakes, and. A group of fair self-perceived speaking ability significantly used trying to enjoy conversation, thinking in their

native language before speaking, using translating from their native language to the target language more significant than good self-perceived ability students and poor self-perceived ability (fair > good > poor). The final group of poor self-perceived speaking ability significantly reported asking interlocutors to simplify the language more often than fair self-perceived ability and than good self-perceived ability (poor > moderate > good).

2.6.2 Communication Strategies Research in Thailand

Considering CS research in Thailand, previous studies of Thai learners, such as Phothongsunan (2010); Somsai and Interaprasect (2011); Prapobratanakul and Kangkun (2011 generally focused on frequency of CS use and results showed diversity due to the different taxonomies that were employed.

Phothongsunan (2010) applied Celce-Murcia, Dörnyei and Thurrell's (1995) taxonomy and used observation and semi-structured interviews to examine Thai university students using English as a medium for teaching and learning. The findings revealed that avoidance strategies were the most frequent strategies used.

Somsai and Interaprasect (2011) collected the data by using semi-structured interview techniques to examine CSs used of Thai university students. They categorised CSs into 2 groups: strategies for conveying a message to interlocutors and strategies for understanding the message. The strategies for conveying a message to interlocutors were sub-categorized into continuous strategies and discontinuous strategies. The results in the continuous strategies showed that the students used familiar words or phrases, switched into Thai, used circumlocution, used fillers, and appealed for help. As per discontinuous strategies, they reported switching topics, appealing for assistance, and consulting a dictionary. With regard to the strategies for understanding the message, the findings presented that the students noticed gestures and facial expression, asked for a repetition, and appealed for assistance.

Prapobratanakul and Kangkun (2011) examined the CS use of forth grade Thai students during a speaking task. Tarone's (1981) and Faerch and Kasper's (1983) taxonomy was applied. They revealed using gestures or facial expression strategies were the most frequently CS used, followed by circumlocution and approximation strategies.

Metcalfe and Noom-Ura (2013) used their Oral Communication Strategy Inventory (OCST) which combined Nakatani's (2006), Chuanchaisit and Prapphal' s (2009), and Chiang's (2011) inventories to investigate the use of CSs of first-year undergraduate students. The results showed that message reduction and alteration strategies were the most frequent use while message abandonment strategies were the least frequent use in coping with speaking difficulties. As for the most often CS use in overcoming listening problems were negotiation for meaning whilst listening strategies whereas the least often listening strategy use was less active listener strategies.

Nitisakunwut and Soranastaporn (2014) investigated communication strategies used by high school Thai and ASEAN students participating in Thailand ASEAN Camp 2013. Nakatani's OCST (2006), observation, and interview were used to collect an information. The results found that the students applied overall CSs at the high level. Social-affective strategies were most frequently used whereas message abandonment strategies were least employed in coping with speaking difficulties. Negotiations for meaning whilst listening strategies were most frequent CS use; however, less active listener strategies were the least applied in overcoming listening problems. The findings also showed that there was a statistically significant relationship between CSs used between Thai and ASEAN students.

- **Communication Strategy Use and Gender**

Several research outside Thailand such as Huang (2010); Bui and Intaraprasert (2012); Zhao and Intaraprasert (2013) investigated the impact of learners' gender and the choice of CSs and found minor relationship between male learners and female counterparts. Furthermore, the significant difference in the use of CSs between males and females only showed at individual strategy use. In the Thai context, empirical research about this variable seems scarce and there is only one study of Somsai was found. Somsai (2011) examined the choice of CS use of Thai undergraduate students majoring in English, and used an adapted CS classification based on Dörnyei and Scott's (1997) and Nakatani's (2006) taxonomy to collect data. The results revealed that there were significant differences between male students and female counterparts. Female students reported using CSs significantly more often than did male peers in

overcoming speaking problems. For example, switching some unknown words or phrases into Thai, speaking slowly to gain time to think, appealing for assistance from other people, asking the interlocutor for a repetition, asking the interlocutor to slow down, and paying attention to the interlocutor's intonation. On the other hand, male students reported using strategies which involve with managing their anxiety more often than female peers, such as feeling all right about their wrong pronunciation, and feeling all right if the conversation does not go smoothly by keeping speaking. Since there were very few conclusions about significance of this variable in the Thai context further investigation is needed to gain new insight information of learners' gender.

- **Communication Strategy Use and Students' High School Background**

After an extensive review of relevant literature, investigation about the choice of CSs in relation to learners' high school background in the Thai context seems rare. Somsai (2011) investigated the use of communication strategies of English major undergraduate students and the location of their institute. The results found that there was no significantly difference in the choice of students' overall CS use. However, at an individual strategy level, the findings revealed significant differences in the use of some CSs. Students whose institutes situated in tourist areas reported higher use of familiar words, phrases, or sentences, and employed expressions which they heard from movies, or songs to convey messages to interlocutors than did those studying at the institutes located in non-tourist destinations.

- **Communication Strategy Use and Self-Perceived Speaking Ability**

During the past decades, most studies in Thailand paid attention to learners' levels of proficiency such as Chuanchaisit and Prapphal (2009)**;** Metcalfe and Noom-Ura (2013)**;** Malasit and Sarobol, 2013; Somsai (2011) and their results showed diversity due to difference of taxonomies employed. Chuanchaisit and Prapphal (2009) investigated the use of communication strategies among 300 high proficiency university students and low proficiency peers. The self-report questionnaire, Strategy Use in Speaking Task Inventory (SUSIT) based on Corder's (1983); Dornyei and Cohen (2002); and Nakatani's (2005, 2006) taxonomies was used to collect quantitative data. The findings found that there were no significant differences

between the two groups. High proficiency students reported significantly more risk taking techniques, such as social-affective, fluency-oriented, and help-seeking strategies. On the contrary, low proficiency reported applying avoidance strategies and message abandonment strategies.

Metcalfe and Noom-Ura (2013) used the Oral Communication Strategy Inventory (OCSI) based on Nakatani's, 2006; Chuanchaisit and Prapphal's, 2009; and Chiang's, 2011 taxonomies to collect quantitative data from first-year undergraduate students. They investigated the use of CSs of first-year undergraduate students and examined the relationship between strategy use and proficiency levels. The results revealed there were a significant difference between high and low proficiency groups. High proficiency students reported significantly higher use of social-affective, fluency-oriented, negotiation for meaning whilst speaking and circumlocution strategies. On the other hand, low proficiency counterparts reported significantly higher use of message abandonment and less active listener strategies.

Using CS categories based on Tarone's (1980); Faerch and Kasper's (1983); Dörnyei and Scott's (1997) taxonomy, Malasit and Sarobol (2013) used a speaking task to examine the choice of CSs among ninth-grade Thai students. The results showed that fillers/hesitation devices were the most frequent CS used. The findings also reported that there were no significant differences in the use of CSs among high-proficiency, moderate-proficiency, and low-proficiency students.

Somsai (2011:179) investigated the choice of CS use of Thai undergraduate students majoring in English and English levels of the students. The findings showed that the advanced level students reported using "circumlocution to convey the message to the interlocutor continuously", and "feeling all right for taking risks while speaking to maintain the conversation" than intermediate and beginner level students. The intermediate level students reported "referring to a dictionary, a book, or other type of document to convey the message" than the beginners and advanced students.

After an extensive review of relevant literature, empirical research exploring the CS use and learners' self-perceived speaking ability in the Thai context seem scarce. Therefore, further investigating is needed to gain insight information about this matter.

For the purpose of easier comparison with research from other countries outside Thailand where OCSI (Nakatani, 2006) has been used, this present research adapted Metcalfe and Noom-Ura's (2013) Oral Communication Strategy Inventory which was based on Nakatani, 2006. It aims to gain new insight knowledge on the use of CSs of engineering students and to examine the use of CSs in relation to different variables such as gender, high school background, and self-perception speaking ability by applying Nakatani (2006)'s taxonomy to gather information. In addition, very little empirical research has been found in relation to Thai engineering students. For this reason, further investigation is needed in order to contribute to the existence of CSs knowledge of the Thai engineering context.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Population and Subjects

The population of this study totaled 630 first-year engineering students from two private university institutes including 272 students from Mahanakorn University of Technology (MUT) and 358 students from Thai-Nichi Institute of Technology (TNI) in the 2015 academic year. At MUT, there were nine study programs in the Engineering Faculty: Electrical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Computer Engineering, Mechatronic Engineering, Industrial Engineering, Logistics Engineering, and Information and Communication Engineering. At TNI, there were five study programs in the Engineering Faculty: Automotive Engineering, Production Engineering, Computer Engineering, Industrial Engineering, and Electrical Engineering. All students at MUT and TNI were taking their first compulsory English subjects. Although each institute named their compulsory English subject differently (ENGL-1101) Fundamental English at MUT, and (ENL-101) English for Communication 1 at TNI, their course syllabus contained four skills of listening, speaking, reading, and writing. How to calculate the sample size of this present study will be shown in the following section.

All students at MUT and TNI were non-English major students. The number of subjects in the present study was selected from the population total of 630 students relying on Krejcie & Mogan's (1970) sampling table at 95 percent confidence level. Consequently, all subjects of this study had to be at least 345 first-year students including 159 students from MUT and 186 students from TNI.

Next, the use of stratified random sampling techniques was applied to select the subjects. After determine the subjects, 400 questionnaires were distributed to the students at MUT, and TNI. Finally 386 out of 400 sets of questionnaires were returned.

After rechecking completeness of the returned questionnaires, the final numbers of subjects participating in this study were 361 students including 161 students from MUT and 200 students from TNI.

3.2 General Information of Participants

Table 3.1 Frequency and Percentage of Participants' Year of Study

Name of Institute	Frequency	Percentage
Mahanakorn University of Technology (MUT)	161	44.60
Thai-Nichi Institute of Technology (TNI)	200	55.40
Total	361	100.00

Table 3.1 shows participants in each university including 161 students from MUT (44.60%), 200 students from TNI (55.40%).

Table 3.2 Frequency and Percentage of Participants' Study Programs

Study Programs	Frequency	Percentage
Production Engineering	33	9.10
Computer Engineering	49	13.60
Mechanical Engineering	45	12.50
Chemical Engineering	7	1.90
Information and Communication Engineering	3	0.80
Electrical Engineering	62	17.20
Automotive Engineering	59	16.30
Civil Engineering	31	8.60
Mechatronics Engineering	4	1.10
Industrial Engineering	20	5.50
Total	361	100.00

Table 3.2 reports participants' study programs including 33 students (9.10%) were in production engineering, 49 students (13.60%) were in computer engineering, 45 students (12.50%) were in mechanical engineering, 7 students (1.90%) were in chemical engineering, 3 students (0.80%) were in information and communication engineering, 62 students (17.20%) were in electrical engineering, 59 students (16.30%) were in automotive engineering, 31 students (8.60%) were in civil

engineering, 4 students (1.10%) were in mechatronics engineering, 20 students (5.50%) were in industrial engineering.

Table 3.3 Frequency and Percentage of Participants' Gender

Gender	Frequency	Percentage
Males	283	78.40
Females	78	21.60
Total	361	100.00

Table 3.3 illustrates participants' gender containing 283 male students (78.40%), and 78 female counterparts (21.60%).

Table 3.4 Frequency and Percentage of Participants' Age

Age	Frequency	Percentage
17 years	1	0.30
18 years	105	29.10
19 years	208	57.60
20 years	21	5.80
21 years	11	3.00
22 years	3	0.80
23 years	5	1.40
24 years	3	0.80
25 years	1	0.30
26 years	2	0.60
29 years	1	0.30
Total	361	100.00

Table 3.4 demonstrates participants' age range classifying into 0.30% were 17 years, 29.10% were 18 years, 57.60% were 19 years, 5.80% were 20 years, 3.00% were 21 years, 0.80% were 22 years, 1.40% were 23 years, 0.80% were 24 years, 0.30% were 25 years, 0.60% were 26 years, 0.30% were 29 years.

Table 3.5 Frequency and Percentage of Participants' High School Background

High School Background	Frequency	Percentage
Urban Setting (Bangkok)	191	52.90
Suburbanised Setting (5 Surrounding Provinces of Bangkok)	45	12.50
Rural Setting (70 Provinces)	125	34.60
Total	361	100.00

Table 3.5 reports participants' high school background including 191 students (52.90%) whose high schools were located in urban setting, 45 students (12.50%) whose high schools were located in suburbanised setting, and 125 students (34.60%) were located in rural setting.

Table 3.6 Frequency and Percentage of Participants' Self-perception Speaking Ability

Self-perception Speaking Ability	Frequency	Percentage
Good	39	10.80
Moderate	199	55.10
Poor	123	34.10
Total	361	100.00

Table 3.6 shows participants' self-perception speaking ability including 39 students (10.80%) self-perceived as good English speakers, 199 students (55.10%) self-perceived as moderate English speakers, 123 students (34.10%) self-perceived as poor English speakers.

3.3 Research Instrument

3.3.1 Questionnaire

In this survey research, the questionnaire was named an adopted Oral Communication Strategy Inventory (OCSI) developed by Metcalfe and Noom-Ura (2013) was used as the main research instrument. In order to measure communication strategies used by first-year engineering students the adopted version of Metcalfe and

Noom-Ura's (2013) questionnaire was employed in this present study. Due to modification, the adopted version used in this study consisted of 63 strategy items and divided into two parts – background information and Oral Communication Strategy Inventory (see Appendix A).

Part I: Background information

This part is background information about participants and they were required to complete their institute's name, study program, gender, age, high school background, opportunities to speak English inside classroom, opportunities to speak English outside classroom, self-perception speaking ability, and self-perception listening ability.

Part II: Oral Communication Strategy Inventory (OCSI)

This part was 63 strategy-items with five rating scales. It was grouped into two sections: communication strategies for dealing with speaking difficulties, and communication strategies for coping with listening problems. Section one contained nine speaking strategies and sub-divided into 38 strategy items. As for section two consisted of six listening strategies and further divided into 25 strategy items. All of the items have been translated into Thai language. The practitioner slightly modified some strategy items (see Appendix B). The adopted Metcalfe and Noom-Ura's (2013) OCSI is shown as follows:

Section 1: Communication strategies for dealing with speaking difficulties:

1. Social and affective strategies (item 1-6), see Appendix A, were used for handling affective factors of learners in social context.
2. Fluency-oriented strategies (item 7-12) were related to learners' fluency in communication.
3. Negotiation for meaning whilst speaking strategies (item 13-16) were relevant to learners' attempt to negotiate with interlocutors.
4. Accuracy-oriented strategies (item 17-21) were concerned with learners' desire to speak English accurately.
5. Message reduction and alteration strategies (item 22-24) were used for avoiding a communication breakdown by reducing an original message or using a similar expression.
6. Nonverbal strategies whilst speaking strategies (item 25-28) were relevant

to using eye contact, gestures, or facial expressions to help listeners.

7. Message abandonment strategies (item 29-33) were associated with learners' reduction of message.

8. Attempt to think in English strategies (item 34-35) were involved with learners' attempt very hard to think in English during actual communication.

9. Circumlocution strategies (item 36-38) were referred to learners' attempt to describe the main characteristics or elements of the target word.

Section 2: Communication strategies for coping with listening problems

1. Negotiation for meaning whilst listening strategies (item 1-6) were used for negotiating behaviour whilst listening.

2. Fluency-maintaining strategies (item 7-10) were related to learners' attention to the fluency of conversational flow.

3. Getting the gist strategies (item 11-15) were referred to learners' attention to general information contained in speech rather than specific utterance.

4. Nonverbal strategies whilst listening (item 16-17) were relevant to the use of nonverbal information, such as speakers' eye contact and gestures.

5. Less active listener strategies (item 18-19) were involved with learners' translation of the message into their native language word by word and depending on familiar words.

6. Word oriented strategies (item 20-25) were relevant to learners' attention to individual words.

To assess the frequency of communication strategy use of learners, the participants were asked to respond to each strategy description based on 5 Likert-Scale with their honest assessment of communication strategy use. Then, all the scores were calculated according to the designed points, that is, 1 = lowest frequent use, 2 = low frequent use, 3 = moderate frequent use, 4 = high frequent use, and 5 = highest frequent use. Finally, the summation of all scores in each strategy group were analysed in order to find out which group of strategy the participants used the most while they were overcoming communication difficulties.

The criteria used for evaluating the degree of frequency of strategy use are: never or almost never used (1.00 – 1.49), generally not / seldom used (1.50 – 2.49),

sometimes or occasionally used (2.50 – 3.49), generally or often used (3.50 – 4.49), and always or almost always used (4.50 – 5.0), see Table 3.7 as follows:

Table 3.7: Criteria for Assessing the Frequency of Strategy Use (Adapted from Oxford, 1990:300)

Level of Strategy Use	Frequency of Strategy Use	Average Mean Scores
Highest	Always or Almost always used	4.50 – 5.00
High	Generally or Often used	3.50 – 4.49
Moderate	Sometimes or Occasionally used	2.50 – 3.49
Low	Generally not / Seldom used	1.50 – 2.49
Lowest	Never or Almost never used	1.00 – 1.49

3.3.2 Development of Questionnaire

The original version of Oral Communication Strategy Inventory (OCSI) was initiated in Japan by Nakatani in 2006. His original questionnaire consisted of 15 taxonomies of communication strategies containing eight strategies which a learner applied when facing speaking difficulties and consisting of seven strategies which were used for overcoming listening problems.

Metcalfe and Noom-Ura (2013) combined Nakatani's (2006), Chiang's (2011), and Chuanchaisit and Prapphal's (2009) questionnaires and came up with a new adopted version. As a result of Metcalfe and Noom-Ura's (2013) modification, in the speaking part, circumlocution strategies were added; consequently, there were nine strategies in this part. Moreover, some strategy items were reworded and new items were created. This resulted in a total of 37 strategy items.

Strategies used to overcome speaking difficulties

1. Social-affective (6 items)
2. Fluency-oriented (6 items)
3. Negotiation for meaning whilst speaking (4 items)
4. Accuracy-oriented (4 items)
5. Message reduction and alteration (3 items)
6. Non-verbal strategies whilst speaking (4 items)

7. Message abandonment (5 items)

8. Attempt to think in English (2 items)

9. Circumlocution (3 items)

As for the listening part, scanning strategies were deleted so there were six communication strategy groups. Furthermore, some strategy items were revised and new items were created. This resulted in a total of 25 strategy items.

Strategies used to overcome listening difficulties

1. Negotiation for meaning whilst listening (6 items)

2. Fluency-maintaining (4 items)

3. Getting the gist (5 items)

4. Non-verbal strategies whilst listening (2 items)

5. Less active listener (2 items)

6. Word-oriented (6 items)

Metcalfe and Noom-Ura's (2013) questionnaire was tested for reliability and the Cronbach alpha coefficient was .838 for a speaking section and .905 for a listening part. This means that their reliability value showed high internal consistency. With regard to Item Objective Congruence (IOC) index, it indicated 0.83 which was judged to be good validity. Since Metcalfe and Noom-Ura's (2013) questionnaire was relatively new in the Thai context and was utilised only one time; therefore, retesting was needed to recheck its value of reliability and validity. The questionnaire test for reliability and validity for the present research is shown in the following sections.

3.3.3 Reliability and Validity of Questionnaire

In the past, Metcalfe and Noom-Ura's (2013) questionnaire showed high internal consistency and was judged to be good validity (Foster & Parker, 1995); however, its value of reliability and validity was needed to review and recheck. Three experts at Thai-Nichi Institute of Technology were invited to verify the reliability and validity of the original version. The result of verification showed that one strategy item in the speaking section was suggested to be split. Hence, the modified version contained 38 strategy items. As for the listening section, 25 strategy items remained the same. Moreover, some items in the Thai translation version were slightly modified. The new Cronbach alpha coefficient was at .923 for the speaking section, and .931 for

the listening part. This is the confirmation that the present questionnaire showed high level of internal consistency. As for validity, the new IOC index was found at 0.91 which was judged to be good validity (Nakatani, 2006).

3.4 Distribution and Collection of Questionnaire

This section shows the summary process of how the research instrument was administered in order to gather data for the present study. The adopted Metcalfe and Noom-Ura's OCSI in Thai version was distributed to first-year engineering students at MUT and TNI during their regular English classes. The practitioner reminded the participants that there was no right or wrong answer. In addition, they were informed that the questionnaires were designed to help them improve their speaking and listening abilities and their responses did not affect their study and grading system. After that, they were given time to complete the questionnaires. Finally, the completed questionnaires were returned back to the practitioner for analysing the results by using the program of Statistical Package for Social Science (SPSS) for window.

3.5 Data Analysis

After the returned questionnaires were received, they were fully checked for completeness. The final numbers of questionnaires were 361 sets. The practitioner analysed the results by using the program of Statistical Package for Social Science (SPSS) for window as follows:

1. **Descriptive Statistics**

Descriptive Statistics contain Arithmetic Mean *(M)* and Standard Deviation *(SD)*. Arithmetic Mean *(M)* was used to identify the average levels of the use of communication strategies of the participants. *(SD)* shows the average distance of the scores from *(M)* (McMillan and Schumacher, 1997). *(SD)* is used for indicating the nature of distribution of a set of scores. Therefore, *(SD)* is useful for comparing the set of scores that had the same *(M)* but with a different range.

2. Independent Sample t-test

Independent sample t-test will be used to determine the level of significant if there are differences in the mean scores of two variables such as gender in relation to the use of CSs.

3. An Analysis of Variance (ANOVA) or F-test

An Analysis of Variance (ANOVA) or F-test will be used to determine the level of difference in the mean scores of more than two variables such as students' study programs, levels of self-perception in speaking ability in relation to the use of CSs.

4. Scheffe Test

After obtaining a statistically significant F-test from the ANOVA, Scheffe test will be used for a pair-wise comparison of two significant F-test to find out which pairs are particularly different from each other.

CHAPTER IV
RESULTS

This chapter reports the results of the study basis on the analysis of the data obtained from the returned questionnaires. The results are presented in according with the four research questions proposed in chapter one. These five questions are presented as follows:

Question One: What kinds of communication strategies are used by first- year engineering students at a private university institute?

Question Two: Are there any differences in the use of communication strategies between male first-year engineering students and female counterparts?

Question Three: Are there any differences in the use of communication strategies employed by first-year engineering students with different high school background?

Question Four: Are there any differences in the use of communication strategies employed by first-year students with a different level of self-perceived speaking ability?

4. 1 Finding One

Research question 1: What kinds of communication strategies are used by first- year engineering students at a private university institute?

To answer research question one, this section presents average frequency of use of the overall communication strategies reported by first-year engineering student at a private university institution. The descriptive results were analysed from the data in 361 returned questionnaires. In table 4.1, nine speaking strategy groups (social-affective, fluency-oriented, negotiation for meaning whilst speaking, accuracy-oriented, message reduction and alteration, non-verbal strategies whilst speaking, message abandonment, attempt to think in English, and circumlocution strategies) are presented according to degrees of use ranking from the most frequent used speaking strategies to the least frequently used speaking strategies. All the data of the overall speaking strategies (entirely 38 items) are shown in Appendix C: Table 1.

As for the criteria for evaluating the levels of frequency are as follows: lowest level - never or almost never used (1.00 – 1.49), low level - generally not / seldom used (1.50 – 2.49), moderate level - sometimes or occasionally used (2.50 – 3.49), high level - generally or often used (3.50 – 4.49), highest level - always or almost always used (4.50 – 5.00).

4.1.1 First-Year Engineering Students' Implementation of Overall Speaking Strategy Category

Table 4.1 First-Year Engineering Students' Implementation of Overall Speaking Strategy Category

(N = 361)

Speaking Strategy Category	M	SD	Rank	Average Frequency of Strategy Use
Message reduction and alteration	3.82	.73	1	High
Non-verbal strategies whilst speaking	3.69	.70	2	High
Social-affective	3.62	.59	3	High
Attempt to think in English	3.59	.75	4	High
Negotiation for meaning whilst speaking	3.46	.70	5	Moderate
Circumlocution	3.41	.69	6	Moderate
Fluency-oriented	3.40	.80	7	Moderate
Message abandonment	3.27	.67	8	Moderate
Accuracy-oriented	3.17	.71	9	Moderate
Overall	**3.47**	**.49**		**Moderate**

Table 4.1 discloses an average frequency use of nine speaking strategies reported by 361 first-year engineering students at a private university institute. The results show that the overall use of speaking strategies was at a moderate level with mean scores (*M*= 3.47). The findings also reveal that the first-year engineering students reported applying four speaking strategies at a high level of use, and five speaking strategies at a moderate level of use. The most frequently used strategies were message reduction and alternation strategies (M = 3.82), followed by nonverbal strategies (M = 3.69), and social-affective (M = 3.62). The least frequently used strategies were accuracy-oriented strategies (M = 3.17).

From the findings in Appendix C, Table 1, the students' use of all speaking strategies ranged from a high level of use to a moderate level of use. The strategy

group of message reduction and alteration were devoted as the most frequently used strategy group (item 23, *M* = 3.99), the second most frequently used strategy group were nonverbal strategies whilst speaking (item 26, *M* = 3.80). However, accuracy-oriented strategy group were devoted as the least frequently used strategy group (item 19, *M* = 2.94). From the analysis, none of the strategy group reached the level of highest use. Likewise, none of the strategy group reached the low and lowest levels of use. (See Appendix C: Table 1).

The next sections present more detailed information of first-year engineering students' speaking strategies. Their highest frequent use of speaking strategies will be shown first. Consequently, message reduction and alteration will be presented first followed by nonverbal strategies whilst speaking, social-affective, attempt to think in English, negotiation for meaning whilst speaking, circumlocution, fluency-oriented, message abandonment, accuracy-oriented. All reference tables in the nine following sections will be totally located in Appendix C (Table 2 – Table 10).

4.1.1.1 First-Year Engineering Students' Implementation of Message Reduction and Alteration Strategies

As shown in Appendix C: Table 2, the first-year engineering students reported the use of message reduction and alteration strategies at a high level in all items, the mean scores ranging from 3.99 – 3.70. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. According to the findings, most of the students reported *"using words that they were familiar with"* (*M* = 3.99, item 23). Furthermore, *"they reduced the message and use simple expressions"* (*M* = 3.77, item 22), regarded as the second high frequently used strategies. The lowest range of these strategies was that *"they changed their sentences when they felt they could not get the message across with the first/previous sentence they produced"* (*M* = 3.70, item 24). See Appendix C: Table 2.

4.1.1.2 First-Year Engineering Students' Implementation of Nonverbal Strategies whilst Speaking Strategies

As can be seen in Appendix C: Table 3, the first-year engineering students reported the use of nonverbal strategies whilst speaking strategies at a high level in all

items, the mean scores ranging from 3.89 – 3.56. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item reached the highest level. According to the findings, the most frequently used strategies were "*using gestures if they could not express themselves*" (*M* = 3.80, item 26). Moreover, when they could not think of word, "*they used mime to try and convey the meaning*" were the second most frequently used strategies (*M* = 3.77, item 28). The lowest in the range (*M* = 3.56, item 27) was *"using facial expression if they could not express what they wanted to say"*. See Appendix C: Table 3.

4.1.1.3 First-Year Engineering Students' Implementation of Social-Affective Strategies

According to Appendix C: Table 4, the frequency of use of social-affective strategies of the first-year engineering students was ranged from a high level of use to a moderate level of use (*M* = 3.76 - 3.46). None of the students reported a low level and the lowest level. Likewise, there was not any item found reaching the highest level. From the findings, it discloses that most of the students reported that *"they tried to relax when they felt anxious"* (*M* = 3.76, item 1). Furthermore, *"they tried to give a good impression to the listener"* (*M* = 3.65, item 3) regarded as the second high frequently used strategies. The lowest frequently used strategies were "using fillers such as "well", "you know", "uh" when they could not think of what to say" (*M* = 3.46, item 6). See Appendix C: Table 4.

4.1.1.4 First-Year Engineering Students' Implementation of Attempt to Think in English Strategies

From the findings in Appendix C: Table 5, the first-year engineering students reported the use of attempt to think in English strategies at a high level in all items, the mean scores ranging from 3.66 – 3.52. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. According to the findings, most of the students reported that *"they created the sentence in Thai first and then constructed English sentences"* (*M* = 3.66, item 34). The lowest frequently used strategies were that "*they thought first of a*

sentence they already know in English and they tried to change it to fit the situation" (*M* = 3.52, item 35). See Appendix C: Table 5

4.1.1.5 First-Year Engineering Students' Implementation of Negotiation for Meaning whilst Speaking Strategies

As shown in Appendix C: Table 6, the frequency of use of negotiation for meaning whilst speaking strategies of the first-year engineering students were ranged from a high level of use to a moderate level of use (*M* = 3.57 - 3.34). None of the students reported a low level and the lowest level. Likewise, there was not any item found reaching the highest level. From the findings, it reveals that most of the students reported that while speaking, *"they paid attention to the listener's reaction to their speech"* (*M* = 3.57, item 15). Furthermore, *"they gave an example if the listener did not understand"* (*M* = 3.54, item 16), regarded as the second high frequently used strategies. The lowest frequently used strategies were "*repeating what they wanted to say until the listener understood"* (*M* = 3.34, item 14). See Appendix C: Table 6

4.1.1.6 First-Year Engineering Students' Implementation of Circumlocution Strategies

According to Appendix C: Table 7, the frequency of use of circumlocution strategies of the first-year engineering students were ranged from a high level of use to a moderate level of use (*M* = 3.57 - 3.20). None of the students reported a low level and the lowest level. Likewise, there was not any item reported reaching the highest level. From the findings, it shows that most of the students reported that *"they described the characteristics of the object instead of using the exact word when they were not sure"* (*M* = 3.57, item 36). The lowest frequently used strategies were "*creating new words when they did not understand how to express themselves"* (*M* = 3.20, item 37). See Appendix C: Table 7

4.1.1.7 First-Year Engineering Students' Implementation of Fluency-Oriented Strategies

As shown in Appendix C: Table 8, the frequency of use of fluency-oriented strategies of the first-year engineering students were ranged from a high level of use

to a moderate level of use (*M* = 3.56 - 3.28). None of the students reported a low level and the lowest level. Likewise, there was not any item reported reaching the highest level. From the findings, it discloses that the most frequently used strategies were *"paying attention to their rhythm and intonation"* (*M* = 3.56, item 7). They reported a moderate level of use that "*they took time to express what they wanted to say*" (*M* = 3.37, item 11) and the least frequently used strategies were *"trying to speak English as fluently as a native speaker"* (*M* = 3.28, item 10). See Appendix C: Table 8.

4.1.1.8 First-Year Engineering Students' Implementation of Message Abandonment Strategies

As can be seen in Appendix C: Table 9, the frequency of use of abandonment strategies of the first-year engineering students were ranged from a high level of use to a moderate level of use (*M* = 3.67 - 3.03). None of the students reported a low level and the lowest level. Likewise, there was not any item found reaching the highest level. From the findings, it discloses that the most frequently used strategies were *"asking other people to help when they could not communicate well"* (*M* = 3.67, item 30). They reported a moderate level of use that "*they left the message unfinished if they faced some language difficulties"* (*M* = 3.48, item 29). The least frequently used strategies were that "*they preferred to remain quiet if they did not know what to say to avoid embarrassing"* (*M* = 3.03, item 33). See Appendix C: Table 9.

4.1.1.9 First-Year Engineering Students' Implementation of Accuracy-Oriented Strategies

According to Appendix C: Table 10, the frequency of use of accuracy-oriented strategies of the first-year engineering students was ranged from a high level of use to a moderate level of use (*M* = 3.50 - 2.94). None of the students reported a low level and the lowest level. Likewise, there was not any item reported reaching the highest level. From the findings, it shows that the most frequently used strategies were "*they corrected their speech when they noticed that they had made a mistake*" (*M* = 3.50, item 20). They reported a moderate level of use that "they emphasised the subject -verb agreement" (*M* = 3.24, item 21). The least frequently used strategies

were that *"they noticed themselves using a phrase which fitted a grammatical rule that they have learnt"* (*M* = 2.94, item 19). See Appendix C: Table 10.

4.1.2 First-Year Engineering Students' Implementation of Overall Listening Strategy Category

With regard to listening strategy category, in table 4.2, six listening strategy groups (negotiation for meaning whilst listening, fluency-maintaining, getting the gist, non-verbal strategies whilst listening, less active listener, and word-oriented) are presented according to degrees of use ranking from the most frequently used listening strategies to the least frequently used listening strategies. All the data of the overall listening strategies (entirely 25 items) are shown in Appendix C: Table 11.

As for the criteria for evaluating the levels of frequency are as follows: lowest level - never or almost never used (1.00 – 1.49), low level - generally not / seldom used (1.50 – 2.49), moderate level - sometimes or occasionally used (2.50 – 3.49), high level - generally or often used (3.50 – 4.49), highest level - always or almost always used (4.50 – 5.00).

Table 4.2 First-Year Engineering Students' Implementation of Overall Listening Strategy Category

(N = 361)

Listening Strategy Category	M	SD	Rank	Average Frequency of Strategy Use
Negotiation of meaning whilst listening	3.71	.71	1	High
Word-oriented	3.61	.64	2	High
Less active listener	3.61	.84	3	High
Nonverbal strategies whilst listening	3.60	1.31	4	High
Getting the gist	3.56	.67	5	High
Fluency-maintaining	3.46	.64	6	Moderate
Overall	**3.60**	**.56**		**High**

Table 4.2 presents an average frequency use of six listening strategies reported by 361 first-year engineering students at a private university institute. The results show that the use of overall listening strategies is high at an average frequency of 3.60. The findings also show that the first-year engineering students 'often or generally used' five types of listening strategies. In other words, five listening strategies were

rated at a high level of use. The rest of the strategies were rated at a moderate level of use. The most frequently used strategies were negotiating of meaning whilst listening strategies (*M* = 3.84). The second most frequently used strategies were word-oriented strategies (*M* = 3.71). The least frequently used strategies were fluency-maintaining strategies (*M* = 3.46).

From the findings in Appendix C, Table 11, the students' use of all listening strategies ranged from 'often or generally used' at an average frequency of 3.84, item 1) to 'sometimes or occasionally used' at an average frequency of 3.34, item 9. The strategy group of negotiation for meaning whilst listening were devoted as the most frequently used strategy group (item 1, *M* = 3.84); however, the second most frequently used strategy group were also in negotiation for meaning whilst listening (item 4, *M* = 3.79). The least frequently used strategy group were fluency-maintaining strategy group (item 9, *M* = 3.34). From the analysis, none of the strategy group reached the level of 'always or almost always used'. Likewise, none of the strategy group reached the level of 'seldom used' and 'never or almost never used'. See Appendix C: Table 11.

The next sections present more detailed information of first-year engineering students' listening strategies. Their highest frequent use of listening strategies will be shown first. Consequently, negotiation for meaning whilst listening strategies will be presented first followed by word-oriented, less active listener, nonverbal strategies whilst listening, getting the gist, and fluency-maintaining. All reference tables in the six following sections will be totally located in Appendix C (Table 12 – Table 17).

4.1.2.1 First-Year Engineering Students' Implementation of Negotiation for Meaning whilst Listening Strategies

As shown in Appendix C: Table 12, the first-year engineering students reported the use of negotiation of meaning whilst listening strategies at a high level in all items, the mean scores ranging from 3.84 – 3.60. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. According to the findings, most of the students reported that "*they asked for repetition when they could not understand what the speaker has said*" (*M* = 3.84, item 1). Furthermore, *"they asked the speaker to slow down when*

they could not understand what the speaker has said" regarded as the second high frequently used strategies (*M* = 3.79, item 4). The lowest range was *"asking the speaker to give an example when they were not sure what he/she said"* (*M* = 3.60, item 6). See Appendix C: Table 12.

4.1.2.2 First-Year Engineering Students' Implementation of Word-Oriented Strategies

As can be seen in Appendix C: Table 13, the first-year engineering students reported the use of word-oriented strategies at a high level in all items, the mean scores ranging from 3.71 – 3.68. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. According to the results, most of the students reported that *"when they heard a question, they focused on what question word had been used*" (*M* = 3.71, item 25). Furthermore, "*they guessed the speaker's intention by picking up familiar words"* (*M* = 3.68, item 21), regarded as the second high frequently used strategies. The lowest range was *"trying to catch every word that the speaker used"* (*M* = 3.54, item 22). See Appendix C: Table 13.

4.1.2.3 First-Year Engineering Students' Implementation of Less Active Listener Strategies

From the findings in Appendix C: Table 14, the first-year engineering students reported the use of less active listener strategies at a high level in all items, the mean scores ranging from 3.69 – 3.54. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. According to the findings, most of the students reported that *"they translated into native language little by little"* (*M* = 3.69, item 18). The lowest range was that *"they only focused on familiar expression"* ((*M* = 3.54, item 19). See Appendix C: Table 14.

4.1.2.4 First-Year Engineering Students' Implementation of Nonverbal Strategies whilst Listening Strategies

According to Appendix C: Table 15, the first-year engineering students reported the use of nonverbal strategies whilst listening strategies at a high level in all items, the mean scores ranging from 3.64 – 3.55. None of the students reported a moderate level, a low level and the lowest level. Likewise, there was not any item falling into the highest level. From the findings, most of the students reported that *"they used gestures when they had difficulties in understanding"* (*M* = 3.64, item 16). The lowest strategy item was *"paying attention to the speaker's eye contact, facial expression and gestures"* (*M* = 3.55, item 17). See Appendix C: Table 15.

4.1.2.5 First-Year Engineering Students' Implementation of Getting the Gist Strategies

According to Appendix C: Table 16, the frequency of use of getting the gist strategies of the first-year engineering students was ranged from a high level of use to a moderate level of use (*M* = 3.69 - 3.41). None of the students reported a low level and the lowest level. Likewise, there was not any item found reaching the highest level. From the findings, it reveals that most of the students reported that *"they tried to catch the speaker's main point if there are too many detail"* (*M* = 3.69, item 11). Furthermore, *"they guessed what the speaker is going to say based on the context"* (*M* = 3.50, item 12), regarded as the second high frequently used strategies. The lowest frequently used strategies (*M* = 3.41, item 15) were that *"they did not mind if they could not understand every single detail"*. See Appendix C: Table 16.

4.1.2.6 First-Year Engineering Students' Implementation of Fluency-Maintaining Strategies

As shown in Appendix C: Table 17, the frequency of use of fluency-maintaining strategies of first-year engineering students were ranged from a high level of use to a moderate level of use (*M* = 3.63 - 3.34). None of the students reported a low level and the lowest level. Likewise, there was not any item found reaching the highest level. From the findings, it reveals that most of the students reported that while speaking, *"they paid attention to the speaker's pronunciation, rhythm, and intonation"* (*M* = 3.63, item 7). Furthermore, *"they sent the speaker signals to show their understanding to avoid communication gaps"* (*M* = 3.51, item 8) regarded as the

second high frequently used strategies. The lowest frequently used strategies (*M* = 3.34, item 9) were that "*even if they did not understand what the speaker has said, they still tried to respond to him/her by saying 'Really?', 'Is that so?'*". See Appendix C: Table 17.

4.2 Finding Two

Research question 2: Are there any differences in the use of communication strategies between male first-year engineering students and female counterparts?

This section presents the comparison of nine speaking strategies of CS use between male first-year engineering students and female peers (see Table 4.3). Additionally, it discloses the comparison of six listening strategies of CS use between male students and female counterparts (see Table 4.4). T-test was applied to identify the significant level of the difference. The criterion set for the value of significance is at <.05.

4.2.1 Implementation of Overall Speaking Strategy Category

Table 4.3 Comparing Nine Speaking Strategies between First-Year Male Engineering Students and Female Counterparts at a Private University Institute (N = 361)

Use of CSs in Speaking	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
Social-affective	3.61	.61	3.68	.54	-.972	.332
Fluency-oriented	3.41	.83	3.36	.69	.529	.597
Negotiation for meaning whilst speaking	3.46	.71	3.47	.66	-.208	.835
Accuracy-oriented	3.18	.72	3.14	.70	.429	.668
Message reduction and alteration	3.80	.74	3.88	.69	-.852	.395
Nonverbal strategies whilst speaking	3.67	.70	3.77	.71	-1.154	.249
Message abandonment	3.24	.68	3.37	.63	-1.505	.133
Attempt to think in English	3.57	.74	3.67	.77	-.989	.323
Circumlocution	3.43	.79	3.35	.68	.985	.325
Overall	**3.46**	**.50**	**3.49**	**.45**	**-.511**	**.610**

** Statistical significant at .05 level*

Table 4.3 presents the mean scores of overall speaking strategies of female engineering students were higher than that of male counterparts, but not at a

significant level of $p < .05$. In other words, the use of CSs in speaking strategies reported by male engineering students and their female counterparts showed no significant difference at a confident level of .05. In addition, there was no significant difference in all speaking strategies - social-affective, fluency-oriented, negotiation for meaning whilst speaking, accuracy-oriented, message reduction and alteration, nonverbal strategies whilst speaking, message abandonment, attempt to think in English, and circumlocution strategies between female students and male peers at a confident level of .05.

T-test was further analysed to examine the statistically significant difference between male engineering students and female peers for each item appearing in nine speaking strategies. The findings reveal that there was no significant difference in five speaking strategies -social-affective, fluency-oriented, negotiation for meaning whilst speaking, accuracy-oriented, and attempt to think in English. On the other hand, there was a significant difference in the rest of speaking strategies - message reduction and alteration, nonverbal strategies whilst speaking, message abandonment, and circumlocution strategies between female students and male peers at a confident level of .05.

The next sections present the levels of significant differences between male engineering students and female peers in the use of four speaking strategies. All the tables discussed in the four following strategies were shown in Appendix D: Table 1 – Table 4.

4.2.1.1 Comparing the Implementation of Message Reduction and Alteration Strategies between First-Year Male Engineering Students and Female Counterparts

Regarding the use of overall message reduction and alteration strategies of male engineering students and female peers, the test found that there was no significant difference at a confident level of .05. However, the results in (Appendix D: Table 1) discloses that there was one strategy item that showed a significant difference. In Appendix D: Table 1 presents that *"female students reported the use of words which were familiar to them"* significantly higher than did male peers, $p < .020$ (item 23).

4.2.1.2 Comparing the Implementation of Nonverbal Strategies whilst Speaking Strategies between First-Year Male Engineering Students and Female Counterparts

Regarding the use of overall nonverbal strategies whilst speaking strategies between male engineering students and female peers, the test found that there was no significant difference at a confident level of .05. However, the results in (Appendix D: Table 2) reveals that there was one strategy item that showed a significant difference. In Appendix D: Table 2 shows that female students reported *"when they could not think of a word, they used mime to try to convey the message"* than did male peers, $p < .001$ (item 28).

4.2.1.3 Comparing the Implementation of Message Abandonment Strategies between First-Year Male Engineering Students and Female Counterparts

Regarding the use of message abandonment strategies between male engineering students and female peers, the test found that there was no significant difference at a confident level of .05. However, the findings in (Appendix D: Table 3) discloses that there was two strategy items that showed a significant difference. In Appendix D: Table 3 reveals that female students reported that *"if they faced language difficulties, they left the message unfinished than did male peers"*, $p < .001$ (item 29). Moreover, female students also reported that *"they used a talking dictionary when they did not know what to say than did male counterparts"*, $p < .032$ (item 32).

4.2.1.4 Comparing the Implementation of Circumlocution Strategies between First-Year Male Engineering Students and Female Counterparts

Regarding the use of overall circumlocution strategies between male engineering students and female counterparts, the test found that there was no significant difference at a confident level of .05. However, the results in (Appendix D: Table 4) reveals that there was one strategy item that showed a significant difference. In Appendix D: Table 4 presents that male students reported *"creating new words when they did not understand to express themselves"* higher than did female peers, $p < .017$ (item 37).

4.2.2 Implementation of Overall Listening Strategy Category

Table 4.4 Comparing Six Listening Strategies of First-Year Male Engineering Students and Female Peers at a Private University Institute (N = 361)

Use of CSs in Listening	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
Negotiation for meaning whilst listening	**3.65**	**.71**	**3.93**	**.68**	**-3.112**	**.002**
Fluency-maintaining	3.45	.64	3.49	.62	-.584	.560
Getting the gist	3.54	.65	3.65	.72	-1.298	.195
Nonverbal strategies whilst listening	3.58	1.43	3.65	.78	-.384	.702
Less active listener	3.57	.81	3.77	.93	-1.842	.066
Word oriented	3.61	.63	3.61	.67	-.063	.950
Overall	**3.57**	**.56**	**3.69**	**.56**	**-1.669**	**.096**

** Statistical significant at .05 level*

Table 4.4 reveals the mean scores of overall listening strategies of female students were higher than that of male counterparts, but not at a significant level of $p < .05$. In other words, the use of CSs in listening strategies reported by females and males showed no significant difference at a confident level of .05. Additionally, there was no significant difference in fluency-maintaining, getting the gist, nonverbal strategies whilst listening, less active listener, and word-oriented strategies between male students and female counterparts. On the other hands, the findings disclose that female peers reported higher in negotiation for meaning whilst listening strategies than their male students at a confident level of .05.

T-test was further analysed to examine the statistically significant difference between males and females for each item appearing in six listening strategies. The findings disclose that there was no significant difference in three listening strategies - fluency-maintaining, nonverbal strategies and word-oriented strategies between male students and female counterparts. However, there was a significant difference in the rest of listening strategies - negotiation for meaning whilst listening, getting the gist, and less active listener strategies at a confident level of .05.

The next section presents the levels of significant differences between male students and female peers' use of three listening strategies. All the tables discussed in the three following strategies were shown in Appendix D: Table 5 – Table 7.

4.2.2.1 Comparing the Implementation of Negotiation for Meaning whilst Listening Strategies between Male Students and Female Counterparts

Regarding relationship between male students and their female counterparts and the use of negotiation for meaning whilst listening strategies, the results found that female students used negotiation for meaning whilst listening strategies significantly more often than did male peer, at a confident level of .05. Additionally, the findings in (Appendix D: Table 5) discloses that a significant higher use five out of six strategies were reported by female students including *"making a clarification request when they were not sure what the speaker has said"*, $p < .028$ (item 2), *"asking the speaker to use easier words, when they had difficulties in comprehension"*, $p < .003$ (item 3), *"asking the speaker to slow down when they could not understand what the speaker has said"*, $p < .025$ (item 4), *"making clear to the speaker what they were not been able to understand"*, $p < .001$ (item 5), *"asking the speaker to give an example when they were not sure what he/she has said"*, $p < .005$ (item 6).

4.2.2.2 Comparing the Implementation of Getting the Gist Strategies between Male Students and Female Counterparts

Regarding relationship between male students and their female counterparts and the use of getting the gist strategies, the test found that there was no significant difference at a confident level of .05. However, the results in (Appendix D: Table 6) reveals that there was one strategy item that showed a significant difference. In Appendix D: Table 6 presents that female students reported *"guessing the speaker intention by paying attention to the first part of the sentence"* higher than did male peers, $p < .036$ (item 14).

4.2.2.3 Comparing the Implementation of Less Active listener Strategies between Male Students and Female Counterparts

Regarding relationship between male students and their female peers and the use of less active listener strategies, the test found that there was no significant difference at a confident level of .05. However, the results in (Appendix D: Table 7) presents that there was one strategy item that showed a significant difference. In

Appendix D: Table 7 reveals that female students reported *"focusing in familiar expression"* greater than did their male peers, $p < .044$ (item 19).

4.3 Finding Three

Research question 3: Are there any differences in the use of communication strategies employed by first-year engineering students with different high school background?

This section reveals the comparison of nine speaking strategies and the first-year engineering students studying in different high school background (see Table 4.5). Additionally, it presents the comparison of six listening strategies of the students with different high school background (see Table 4.6). F-test or ANOVA was applied to identify the significance level of difference. The criterion set for the value of significance is at <.05.

4.3.1 Implementation of Overall Speaking Strategy Category

Table 4.5 Comparing the Use of Nine Speaking Strategies of First-Year Engineering Students with Different High School Background at a Private University Institute (N=361)

ANOVA

Components		SS	df	MS	F	p	Scheffe
Social and affective	Between groups	.202	2	.101	.285	.752	
	Within groups	126.882	358	.354			
	Total	127.084	360				
Fluency-oriented	Between groups	.112	2	.056	.086	.917	
	Within groups	232.369	358	.649			
	Total	232.481	360				
Negotiation for meaning whilst speaking	Between groups	.912	2	.456	.944	.390	
	Within groups	172.881	358	.483			
	Total	173.793	360				
Accuracy-oriented	Between groups	.016	2	.008	.016	.985	
	Within groups	183.576	358	.513			
	Total	183.592	360				

Components		SS	df	MS	F	p	Scheffe
Message reduction and alteration	Between groups	.745	2	.372	.701	.497	
	Within groups	190.310	358	.532			
	Total	191.055	360				
Non-verbal strategies whilst speaking	Between groups	.412	2	.206	.419	.658	
	Within groups	175.780	358	.491			
	Total	176.191	360				
Message abandonment	Between groups	1.007	2	.503	1.135	.322	
	Within groups	158.789	358	.444			
	Total	159.796	360				
Attempt to Think in English	Between groups	.503	2	.251	.452	.637	
	Within groups	199.138	358	.556			
	Total	199.641	360				
Circumlocution	**Between groups**	**3.003**	**2**	**1.501**	**3.167**	**.043***	**RU>UB**
	Within groups	**169.725**	**358**	**.474**			
	Total	**172.728**	**360**				
Overall	**Between groups**	**.1346**	**2**	**.073**	**.306**	**.737**	
	Within groups	**85.337**	**358**	**.238**			
	Total	**85.483**	**360**				

** Statistical significant at .05 level*

Table 4.5 presents that there was no significant difference in the overall CSs use of speaking strategies of engineering students studying in different high school background at a confident level of .05. Additionally, there was no a significant difference in eight speaking strategies, that are social and affective, fluency-oriented, negotiation for meaning while speaking, accuracy-oriented, message reduction and alteration, nonverbal strategies whilst speaking, message abandonment, and attempt to think in English strategies. However, the findings disclose a significant difference, at a significance level of < .05, appeared only in circumlocution strategies. In the following sections further analysis was applied by using Scheffe test to find significant difference in the circumlocution strategies.

The findings disclose a significant difference between engineering students whose high schools are located in rural setting (RU) and their peer whose high school

are in urban setting (UB) appeared only in circumlocution strategies. As shown in (Appendix D: Table 8), RU students reported "*describing the characteristics of the object instead of using the exact word when they were not sure", p* < .013 (item 36), more often than that of their UB peers.

4.3.2 Implementation of Overall Listening Strategy Category

Table 4.6 Comparing between Six Listening Strategies of First-Year Engineering Students with Different High School Background at a Private University Institute (N=361)

ANOVA

Components		SS	df	MS	F	p	Scheefe
Negotiation of meaning whilst listening	Between groups	1.551	2	.775	1.531	.218	
	Within groups	85.337	358	.238			
	Total	182.817	360				
Fluency-maintaining	Between groups	.593	2	.297	.734	.481	
	Within groups	144.782	358	.404			
	Total	145.375	360				
Getting the gist	Between groups	1.134	2	.567	1.276	.280	
	Within groups	159.053	358	.444			
	Total	160.186	360				
Nonverbal strategies whilst listening	Between groups	4.258	2	2.129	1.240	.291	
	Within groups	614.849	358	1.717			
	Total	619.107	360				
Less active listener	Between groups	1.356	2	.678	.965	.382	
	Within groups	251.623	358	.703			
	Total	252.979	360				
Word-oriented	Between groups	.482	2	.241	.593	.553	
	Within groups	145.654	358	.407			
	Total	146.135	360				
Overall	**Between groups**	**1.042**	**2**	**.521**	**1.672**	**.189**	
	Within groups	**111.593**	**358**	**.312**			
	Total	**112.635**	**360**				

** Statistical significant at .05 level*

Table 4.6 reveals that there were no significant differences in the overall use of listening strategies among engineering students with different a high school background at a confidence level of .05. Moreover, the findings reveal that there was no significant difference, at a significant level of < .05, in all six listening strategies - negotiation for meaning whilst listening, fluency-maintaining, getting the gist, nonverbal strategies whilst listening, less active listener, and word-oriented strategies.

F-test or ANOVA was further applied to identify the significance level of difference of six listening strategies. The findings reveal that there was no significant difference with all six listening strategies. The criterion set for the value of significance is at <.05.

4.4 Finding Four

Research question 4: Are there any differences in the use of communication strategies employed by first-year students with a different level of self-perceived speaking ability?

This section reveals the comparison of nine speaking strategies of CS use and students with different self-perceived speaking ability (see Table 4.8). F-test or ANOVA was applied to identify the significance level of difference. The criterion set for the value of significance is at <.05.

4.4.1 Implementation of Overall Speaking Strategy Category

Table 4.7 Comparing the Use of Nine Speaking Strategies of Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institute (N=361)

ANOVA

Components		SS	df	MS	F	p	Scheffe
Social and affective	**Between groups**	**4.274**	**2**	**2.137**	**6.229**	**.002***	**G > P M > P**
	Within groups	**122.811**	**358**	**.343**			
	Total	**127.084**	**360**				

Components		SS	df	MS	F	p	Scheffe
Fluency-oriented	**Between groups**	**13.671**	**2**	**6.835**	**11.184**	**.000***	**G > M G > P M > P**
	Within groups	**218.810**	**358**	**.611**			
	Total	**232.481**	**360**				
Negotiation for meaning whilst speaking	**Between groups**	**6.428**	**2**	**3.214**	**6.875**	**.001***	**G > P**
	Within groups	**167.365**	**358**	**.467**			
	Total	**173.793**	**360**				
Accuracy-oriented	**Between groups**	**6.792**	**2**	**3.396**	**6.876**	**.001***	**G > P**
	Within groups	**176.800**	**358**	**.494**			
	Total	**183.592**	**360**				
Message reduction and alteration	**Between groups**	**6.064**	**2**	**3.032**	**5.868**	**.003***	**G > P M > P**
	Within groups	**184.991**	**358**	**.517**			
	Total	**191.055**	**360**				
Non-verbal strategies whilst speaking	Between groups	.475	2	.238	.484	.617	
	Within groups	175.716	358	.491			
	Total	176.191	360				
Message abandonment	**Between groups**	**5.437**	**2**	**2.719**	**6.305**	**.002***	**G < M M < P**
	Within groups	**154.359**	**358**	**.431**			
	Total	**159.796**	**360**				
Attempt to Think in English	Between groups	.778	2	.389	.700	.497	
	Within groups	198.864	358	.555			
	Total	199.641	360				
Circumlocution	Between groups	2.243	2	1.122	2.355	.096	
	Within groups	170.485	358	.476			
	Total	172.728	360				
Overall	**Between groups**	**2.715**	**2**	**1.357**	**5.871**	**.003***	
	Within groups	**82.768**	**358**	**.231**			
	Total	**85.483**	**360**				

** Statistical significant at .05 level*

Table 4.7 discloses that there was a significant difference (p =.003) in the overall use of oral communication strategies among the engineering students with different self-perceived speaking ability at a confident level of .05. The findings show

a significant difference, at a significant level of <.05, six out of nine strategies, that are social and affective, fluency-oriented, negotiation of meaning whilst speaking, accuracy-oriented, message reduction and alteration, and message abandonment strategies. On the contrary, there was no significant difference in non-verbal, attempt to think in English, and circumlocution strategies. In the following sections further analysis was applied by using Scheffe test to find significant difference in each pair of these six speaking strategies.

The findings disclose a significant difference between students with good self-perception and peers with poor self-perception or (G > P) in social and affective, message reduction and alteration, fluency-oriented, negotiation for meaning whilst speaking, and accuracy-oriented (see Appendix D: Table 9 – Table 12). On the other hand, the group of G < P reported applying message abandonment strategies. In addition, there was no significant difference between students with good self-perception (G) and their peers with moderate self-perception (M) in social and affective, message reduction and alteration, and message abandonment strategies. However, some strategy items were found significantly (see Appendix D: Table 13 – Table 14).

4.4.2 Implementation of Overall Listening Strategy Category

Table 4.8 Comparing between Six Listening Strategies of First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institute (N=361)

ANOVA

Components		SS	df	MS	F	p	Scheffe
Negotiation of meaning whilst listening	Between groups	.947	2	.473	.932	.395	
	Within groups	181.870	358	.508			
	Total	182.817	360				
Fluency-maintaining	Between groups	1.292	2	.646	1.606	.202	
	Within groups	144.083	358	.402			
	Total	145.375	360				
Getting the gist	Between groups	1.584	2	.792	1.788	.169	
	Within groups	158.602	358	.443			
	Total	160.186	360				

Components		SS	df	MS	F	p	Scheffe
Nonverbal strategies whilst listening	Between groups	1.215	2	.608	.352	.704	
	Within groups	617.892	358	1.726			
	Total	619.107	360				
Less active listener	Between groups	1.040	2	.520	.739	.478	
	Within groups	251.939	358	.704			
	Total	252.979	360				
Word-oriented	Between groups	1.127	2	.563	1.391	.250	
	Within groups	145.010	358	.405			
	Total	146.136	360				
Overall	**Between groups**	**.726**	**2**	**.363**	**1.162**	**.314**	
	Within groups	**111.909**	**358**	**.313**			
	Total	**112.635**	**360**				

** Statistical significant at .05 level*

Table 4.8 discloses that there was no significant difference in the overall use of listening strategies among the engineering students with different self-perception speaking ability at a confident level of .05. In addition, the findings show no significant difference, at a significant level of <.05, in all six listening strategies. The results of Scheffe test also showed no significant difference in any of these strategies.

CHAPTER V

DISCUSSIONS

In the previous chapter reported the results of frequency of communication strategies used by first-year engineering students at a private university institute. In addition, it showed differences according to gender, high school background, and self-perception of speaking ability. This chapter shows discussions of four results in the following sections.

1. Discussion of finding one - frequency of communication strategies used by first-year engineering students at a private university institute.
2. Discussion of finding two – discrepancy of communication strategies used by first-year engineering male students and female counterparts at a private university institute.
3. Discussion of finding three - discrepancy of communication strategies used by first-year engineering students with different high school background at a private university institute.
4. Discussion of finding four - discrepancy of communication strategies used by first-year engineering students with different levels of self-perceived speaking ability at a private university institute.

This present research attempts to answer the following questions.

1. What kinds of communication strategies are used by first- year engineering students at a private university institute?
2. Are there any differences in the use of communication strategies between male first-year engineering students and female counterparts?
3. Are there any differences in the use of communication strategies employed by first-year engineering students with different high school background?
4. Are there any differences in the use of communication strategies employed by first-year students with a different level of self-perceived speaking ability?

5.1 Discussion of Finding One

The findings of this study reveal that first-year engineering participants at the private university institutes most frequently used message reduction and alteration strategies (or using familiar vocabulary, expressions, and grammatical structures) to cope with speaking difficulties whereas least frequently used strategies were accuracy-oriented. The results support Bialystok's report (1990) that second language or foreign language learners tend to use familiar words more often than to take risk to apply unfamiliar ones. The findings are also in line with Thai studies (Metcalfe and Noom-Ura (2013); Somsai (2011). In addition, they also correspond with the investigation in Japan (Nakatani, 2006) and some results in Taiwan (Chen, 2009; Chiang, 2011; Huang, 2010). To be specific, students had a tendency to use familiar words or in-complicated expressions to communicate when overcoming language difficulties with native or non-native listeners. As for some difficult words or expressions that they could not retrieve spontaneously, they often resourced for utilising gestures or mine to facilitate the meaning.

The results could infer that whether undergraduates are English major or non-English major the techniques which they are most likely to apply to overcome speaking difficulties are message reduction and alteration strategies. Even though their deficiency in lexical and syntactic knowledge, most of them did not abandon their attempt to communicate, they showed strong intention to overcome oral communication difficulties and used other alternative achievement strategies to reach communication goals.

In addition, it is worth to note here that a method of data collection may affect results of participants' use of communication strategies. This case appears in Teng's (2011) report in Taiwan. He used a questionnaire, a role-play task, and an interview guide to collect data and revealed that Taiwanese EFL students mostly made use of non-verbal strategies to overcome their speaking difficulties. A possible factor that can influence these results is the different methods of data collection in his survey. Teng (2011) used a role-play task, which is a two-way communicational method. Hence, it is not surprised why most of his participants applied non-verbal strategies to compensate for their deficiency of the target language. Nakatani (2006) and Noom-

Ura (2013) used speaking tasks, which is classified as a one-way communication method, and participants reported using message reduction and alteration strategies when they lacked of words or expressions to communicate.

Regarding listening problems, negotiation for meaning whilst listening, word-oriented, and less active listener were reported as the most frequently used strategies in order to cope with listening difficulties by first-year engineering students at the private university institutes whereas fluency-maintaining strategies were the least frequent strategy group.

As for the first most frequently reported listening strategies, these present findings are in line with Metcalfe and Noom-Ura's (2013) study in Thailand and Teng's (2011) research in Taiwan. On the other hand, their findings contradict with Nakatani, 2006 who presented that most of his participants used non-verbal strategies to overcome listening problems and Chiang, 2011 who found that most of Taiwanese participant made use of getting the gist strategies. When taking closer consideration, one possible explanation could be that students' level of listening ability may influence the choice of listening strategies. As stated in Irgin (2011); Mirzaei and Heidari (2012), high ability students are capable to get the general information, can analyse the context, and guess overall meaning. On the other hand, low ability students utilised nonverbal strategies, such as a speaker's eye contact, facial expressions, and gestures more frequently to compensate for their deficiency of the target language (Canale & Swain, 1980; Faerch & Kasper, 1983; Tarone, 1977).

The second most highly used listening strategy group in this present study was word-oriented strategies which are not consistent with Metcalfe and Noom-Ura, 2013; Nakatani, 2006; nor Chiang, 2011. Even though the results did not consistent across different cultures, all these reported strategies - word-oriented, non-verbal strategies whilst listening, negotiation for meaning whilst listening - were categorised as achievement strategies. Therefore, it may be inferred that learners in each culture view these strategies as a useful language tool to achieve success in listening. Several researchers seem to support these achievement listening tools such as Allen, 1999; Murphy, 1991; Nakahama, Tyler and Van Lier, 2001; Naughton, 2006; Vandergrift, 1999; Vogely, 1995.

The third most highly used listening strategy group in this present study was

less active listener strategies which contradict with Metcalfe and Noom-Ura's (2013); Nakatani's (2006); Chiang's (2011) investigation. The participants in this present research translated the words they heard into Thai little by little and only focused on familiar words. This strategy group was categorised as non-achievement strategies which imply their deficiency in listening competence. One possible factor could be their field of study; all the participants in this current study were non-English major. Due to their engineering technical knowledge requirements are highly demanding and they tend to have less opportunity to be exposed to English authentic or natural listening materials. As a result, their listening ability is still needed for further practice.

5.2 Discussion of Finding Two

Even though the results of this current study show no significant difference in the overall use of speaking strategy category reported by first-year male engineering students and their female counterparts, these findings reveal there are the significant differences at individual strategy items, that are *using words that are familiar to them* (item 23) ; *using mime to convey the meaning* (item 28); *leaving the message unfinished when facing some language difficulties* (item 29); *using a talking dictionary to help communication* (item 32); *creating new words when do not understand* (item 37). When considering these significant variations, it was found that female students applied more social orientation when facing difficulties than their male peers. This supports Oxford, 1993 who claim that females had a tendency to be more active in applying strategy use than did their male counterparts. In addition, these present findings are also consistent with Bui and Intaraprasert, 2012; Kaivanpanah et al., 2012; Somsai, 2011; Zhao and Intaraprasert, 2013.

One possible explanation for such significant difference is females' social orientation. This is affirmed by several experts such as Browne, 1996; Ok, 2003; Mori and Gobel, 2006. Browne's (1996) report confirms that female students show willingness to communicate and deal with people in English more than their male peers. Ok (2003) affirms that females are superior to males; they are different in many social skills which females show more social orientation than their male counterparts. Mori and Gobel's (2006) study assert that female students want to make friends and show interest in getting contact with foreign speakers than their male peers.

According to this current research, although deficiency of female students in lexical and syntactic knowledge, they used familiar words and applied mine to convey the meaning, they also used modern devices such as a talking dictionary to maintain the conversation with interlocutors. These strategies used may be implied interactive and cooperative skills when facing difficulties.

However, the findings of this present study support Ghani's (2003:33) statement that "males do better than females in the use of some strategies." These present findings found one strategy item which stated that more male students *created new words when they did not understand how to express themselves* (item 37) than their female peers. Somsai's (2011) study also revealed that more male students reported the use of certain individual strategy items than their female counterparts. These included managing their anxiety while maintaining the conversation with native or non-native speakers, such as "feeling OK when making wrong pronunciation to maintain the conversation", "feeling alright if the conversation does not go smoothly by keeping speaking to maintain the conversation". The possible explanation is that male students may have higher self-confidence in oral interacting with foreign speakers and have more enjoyment of speaking activities in maintaining conversation than that of their female counterparts which is confirmed with Maubach and Morgan, 2001. Therefore, these male students have a higher tendency to create new unknown words while interacting without leaving unfinished message and keep a conversation flow enjoyably and confidently than that of their female peers.

With regard to listening strategies, the results of this present study reveal that the use of CSs in coping with listening problems reported by female students and their male peers showed no significant difference. On the contrary, the findings disclose that there was significant difference in the use of negotiation for meaning whilst listening strategies of female students and their male counterparts. That is, female peers reported higher use in *making a clarification request (*item 2); *asking the speaker to use easier words* (item 3); *asking the speaker to slow down* (item 4); *making clear to the speaker when being unable to understand* (item 5); *asking the speaker to give an example* (item 6) than their male counterparts. Somsai's (2011) study also found similar results. These may be inferred that their differentiation is due to a personality variable in terms of tolerance of ambiguity as appeared in Erten and

Topkaya, 2009. Females try to make sure that everything they have heard are true and correct without uncertainty. There is possibility that they ask questions to confirm their comprehension, they clarify some unknown information, and also use other methods to resolve ambiguity during the course of conversation. Consequently, they applied several listening techniques to overcome their difficulties.

5.3 Discussion of Finding Three

The surprising findings of this present study is that the engineering students whose high school background were located in the rural setting (RU) reported significant higher use of circumlocution strategies than did their peers whose high school were located in the urban setting (UB). Circumlocution strategies refer to describing the characteristics of the object instead of using the exact word when a learner is not sure. After extensive searching of relevant literature, there is very little empirical research investigating about the choice of CSs and students' high school background in terms of their school setting. There are two different possibilities in providing explanation.

The first possible explanation can be inferred from some research in Thailand, for example Metcalfe and Noom-Ura, 2013; Somsai, 2011who reported that high proficiency students applied circumlocution strategies when they lacked of the appropriate word to express themselves. Their findings are in line with some experts such as Potizer (1983); Oxford and Nyikos (1989) who also asserted that high ability students used communicative and functional strategies more often than their lower ability peers. Therefore, it may be implied that some of these engineering students whose high schools were located in the rural setting possessed a higher level of oral communication ability (RU) than their counterparts whose high schools were in the urban setting (UB). Hence, which factor may influence their high level of oral communication ability?

One possible factor which may influence a high level of oral communication ability is students' motivation (Rubin, 1975). As mentioned in Intaraprasert (2000), the highly motivated students tend to seek opportunities to be exposed to English outside the classroom setting. The more exposure to oral communication in English the more fluency they become. This results in increasing their oral communication

ability and applying a wider range of strategies; consequently, they may become high proficiency students (Yule, 1996).

However, there is some research which concluded different assumption. Chuanchaisit and Prapphal's (2009:113); study asserted that circumlocution strategies were popularly used among low proficiency students. They tend to paraphrase by describing characteristic elements of the intended word to compensate for their deficiency in linguistic knowledge. Their study is in line with several scholars, such as Fulcher (2003); Poulisse (1990); Yoshida-Morise (1998) who have asserted that the students with a low level of oral communication ability lacked of lexical knowledge; therefore, instead of using the appropriate words they used explanation or employed expressions with have similar feature to the intended words. On the contrary, high proficiency students could retrieve for the appropriate words and expressions to express themselves and convey the message to the listener. Consequently, according to these groups of researchers, it may be implied that some of these engineering students who finished high school from the rural setting (RU) may have a low oral communication ability. On the contrary, it is most likely to imply that those students who finished from the urban setting (UB) could possess higher oral communication proficiency.

Therefore, there may be other factors which affect the different assumptions of there experts such as a method of data collection.

5.4 Discussion of Finding Four

The results of this present study disclose that there was a significant difference in the overall use of oral communication strategies among the engineering students who had different self-perceived speaking ability. The findings also reveal that six out of nine speaking strategy groups indicated significant differences, that are social and affective, fluency-oriented, negotiation of meaning whilst speaking, accuracy-oriented, message reduction and alteration, and message abandonment strategies. In addition, the findings also show that there was a significant difference between students with good self-perception (G) and their peer with poor self-perception (P), or (G > P) in five strategy groups, that are social and affective, message reduction and alteration, fluency-oriented, negotiation for meaning whilst speaking, and accuracy-

oriented strategies. On the contrary, the group of G < P reported applying message abandonment strategies. When taking a look at several strategy groups in these present study they are in line with Chuanchaisit and Prapphal's (2009); Metcalfe and Noom-Ura's (2013); Mirzaei and Heidari's (2012) studies even though these previous research aimed to investigate students' actual speaking proficiency. Consequently, a possible explanation may be inferred that the term 'self-perception' competence in speaking might share some areas with assessing actual oral competence with the actual speaking tasks as reported in the study of Bacon and Finnemann, 1990; Baker and MacIntyre, 2000. Students with good self-perception competence might not be directly related to their actual proficient competence but it might be implied that they possess stronger confidence and show more willingness to communicate as found in Chen, 2009.

Furthermore, this present study reports that students with good self-perception competence (G) reported higher frequency of achievement strategies than moderate self-perception (M) and poor self-perception (P), or (G > M & P). These are in line with the findings in Intaraprasert (2000); Zhao and Intaraprasert (2013). This may be implied that students with high language ability may seek opportunities to be exposed to English inside and outside the classroom setting which finally may enable them to employ a wider variety of strategies.

CHAPTER VI

CONCLUSION

6.1 Conclusion of the Study

This study aims to investigate which communication strategies (CSs) are most frequently used by first-year engineering students at Mahanakorn University of Technology (MUT), and Thai-Nichi Institute of Technology (TNI) recognised as private university institutes in Bangkok. The participants in this study were 361 students including 161 students from MUT and 200 students from TNI. To collect data the adopted version of Metcalfe and Noom-Ura's (2013) questionnaire was administrated to all the subjects. Lastly, the data obtained from the questionnaires were analysed through SPSS statistic package. The findings of this study are summarised in the following sections.

6.1.1 Conclusion of Finding One

The results show that the overall use of CSs in speaking strategies by engineering students was reported at a moderate level. The most frequently used strategies were message reduction and alternation strategies whereas the least frequently used strategies were accuracy-oriented strategies. As for listening strategies, the results report that the use of overall listening strategies was showed at a high level. While the most frequently used strategies were negotiating of meaning whilst listening strategies, the least frequently used strategies were fluency-maintaining strategies.

6.1.2 Conclusion of Finding Two

The overall use of CSs in speaking strategies reported by male engineering students and their female peers showed no significant difference. However, a significant difference was found at an individual level. Regarding listening strategies, the overall use of CSs in listening strategies reported by male engineering students and their female peers showed no significant difference. On the other hands, the findings disclose that female students reported higher used in negotiation for meaning whilst listening strategies than did their male peers.

6.1.3 Conclusion of Finding Three

There was no significant difference in the overall CSs use of speaking strategies of engineering students studying in different high school background. However, a significant difference between engineering students whose high schools are located in rural setting (RU) and their peer whose high school are in urban setting (UB) appeared only in circumlocution strategies. As for listening strategies, the findings present that there were no significant differences in the overall use of listening strategies among engineering students studying in different high school background. In addition, there was not any significantly different in every strategy group of listening strategies.

6.1.4 Conclusion of Finding Four

The findings report that there was a significant difference in the overall CS use of oral communication strategies among engineering students with different self-perception speaking ability. The results also show a significant difference of six out of nine speaking strategies. According to further analysis, a significant difference was found in social and affective, message reduction and alteration, fluency-oriented, negotiation for meaning whilst speaking, and accuracy-oriented strategies between students with good self-perception and peers with poor self-perception or (G > P). On the other hand, the group of G < P reported applying message abandonment strategies. In addition, there was no significant difference between students with good self-perception (G) and their peers with moderate self-perception (M) in social and affective, message reduction and alteration, and message abandonment strategies.

6.2 Implications of the Research Findings for Teaching and Learning of English for MUT and TNI Students Majoring in Engineering

In the previous sections, the findings of research questions are summarised. Some implications for teaching and learning of English for MUT and TNI students majoring in engineering will be shown as follows:

1. One finding reveals that female engineering students reported using more

oral communication strategies, specifically message reduction and alteration, message abandonment, and nonverbal strategies to cope with speaking difficulties than did their male peers. Even though the female students tended to use more types of strategies their choice of strategy use is considered as reduction strategy; in other words, it is avoiding methods. In addition, nonverbal strategies are not required any linguistic knowledge. As for their male counterparts who significantly employed a small number of speaking strategies, that was circumlocution. Language teachers should encourage and train the students to use a wider range of strategies such as asking and checking confused messages from listeners. The teachers can also suggest them to give further explanation by giving some examples if listeners still do not understand. These techniques may reduce their use of avoidance strategies. Additionally, teachers should encourage the students to feel relaxed and show willingness in taking risks in making mistakes while speaking. It is necessary to inform the students that they are not expected to speak English accurately and fluently. The teachers should explicitly teach their students to resort to CSs in order to cope with difficulties without being shy and afraid of making mistake. Furthermore, the teachers should encourage their students about benefits of learning from making mistakes.

2. Due to students' limitation of being exposed to naturally communication outside the classroom setting, creating of English speaking activities outside classroom setting such as English game shows, story telling, or English speaking contests lead to increasing more opportunities for the students to be exposed to natural English speaking. These activities can assist them to practice the target language, have more opportunities to hear more vocabulary, and provide more chance to employ the CS use when encountering difficulties while participating in the activity.

3. Based on the findings related to students' choice of listening strategies when coping with listening problems, even though the strategy group of negotiation for meaning whilst listening was the first rank of most frequently used strategies their second and third ranks (word-oriented and less active listeners; respectively) are considered to be applied by low proficiency students. The teachers should train them to use better listening techniques such as getting the gist.

6.3 Proposals for Further Research

1. After extensive searching of related literature, there is a little research in investigating the relationship between gender and the choice CS use in the Thai context. In addition, other variable should be crossed examination such as investigating the possible differences between reported strategy use and actual use of CS on a wide variety of different language tasks is needed.

2. Empirical research exploring the relationship between CS use and learners' self-perceived speaking ability in the Thai context seem scarce. Therefore, further investigating is needed to contribute to the existence of CSs knowledge of the Thai engineering context.

3. There is a little empirical research investigating the relationship between the use of CSs and students' high school background in terms of the location of school setting in the Thai context. According to the findings of this present study, there were over thirty percent of engineering students studied in the rural setting (and nearly fifteen percent studied in the suburbanised setting). The number was accounted for nearly a half of the total number of engineering students participating in this study. Due to a limitation of data collection and data analysis, there is some unclear explanation about their level of oral communication ability. Further investigating is needed to contribute to the existence of CSs knowledge of the Thai engineering context.

4. This research aims to investigate CSs employed by engineering students at a private university institute. An objective to examine the choice of CSs in other students' fields of study such as information technology, business administration, or medical studies may discover interesting results.

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Appendix A

Oral Communication Strategy Inventory

The Oral Communication Strategy Inventory (OCSI) is designed to gather information about how you, as a student who is learning English as foreign language, solve communication problems in speaking and listening English.

Part I: General Information

Put (√) in front of the item which you select and write required information

1. Name of university
   - [ ] Thai-Nichi Institute of Technology
   - [ ] Mahanakorn University of Technology

2. Program of Study

[ ]	Production Engineering	[ ]	Electrical Engineering
[ ]	Computer Engineering	[ ]	Automotive Engineering
[ ]	Mechanical Engineering	[ ]	Civil Engineering
[ ]	Chemical Engineering	[ ]	Mechatronic Engineering
[ ]	Logistic Engineering	[ ]	Industrial Engineering
[ ]	Information and Communication Engineering	[ ]	Others (please specific_____)

3. Gender
   [ ] Male [ ] Female

4. Age _____

5. Location of High School
   - [ ] Bangkok
   - [ ] Parimonthon Area (Nonthaburi, Pathum Thani, Samut Prakan, Nakhon Pathom, and Samut Sakhon
   - [ ] 70 Provinces outside Bangkok and Parimonthon Area (please specific _____)

6. Opportunity to speak English inside-classroom.
   [ ] Rarely [ ] Sometimes [ ] Often

7. Opportunity to speak English outside-classroom.

[ ] Rarely [ ] Sometimes [ ] Often

8. Self-perception about speaking ability.

[ ] Good [ ] Moderate [ ] Poor

9. Self-perception about listening ability.

[ ] Good [ ] Moderate [ ] Poor

Part II

Section 2.1

There are 38 statements in this section, please carefully read each statement and put (√) on the response number (5, 4, 3, 2, or 1) which reflects frequency of technique do you use in order to solve speaking problems in English. In each item only one number can be chosen. There is no right or wrong answer to these statements. The criteria for the response are as follows:

5 = Highest frequent use (Always or almost always used)

4 = High frequent use (Generally or often used)

3 = Moderate frequent use (Sometimes or occasionally used)

2 = Low frequent use (Generally not / seldom used)

1 = Lowest frequent use (Never or almost never used)

Communication Strategies Used to Overcome Speaking Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
Strategy 1: Social and affective strategies					
1. I try to relax when I feel anxious.					
2. I try to enjoy the conversation.					

Communication Strategies Used to Overcome Speaking Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
3. I try to give a good impression to the listener.					
4. I actively encourage myself to express what I want to say.					
5. I encourage myself to use English even though I might make mistakes.					
6. I use fillers such as "well, you know", "uh" when I cannot think of what to say.					
Strategy 2: Fluency-oriented strategies					
7. I pay attention to my rhythm and intonation.					
8. I pay attention to my pronunciation.					
9. I pay attention to the conversation flow and avoid silence.					
10. I try to speak English as fluently as native speaker.					
11. I take my time to express what I want to say.					
12. I try to speak clearly and loudly to make others heard.					
Strategy 3: Negotiation for meaning while speaking strategies					
13. I check with the listener to make sure he/she understands what I have said.					
14. I repeat what I want to say until the listener understands.					
15. While speaking, I pay attention to the listener's reaction to my speech.					
16. I give example if the listener does not understand what I am saying.					
Strategy 4: Accuracy-oriented strategies					
17. I pay attention to grammar during conversation.					
18. I pay attention to word order during conversation.					
19. I notice myself using a phrase which fits a grammatical rule that I have learnt.					

Communication Strategies Used to Overcome Speaking Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
20. I correct my speech when I notice that I have made a mistake.					
21. I emphasis the subject and verb of the sentence.					
Strategy 5: Message reduction and alteration strategies					
22. I reduce the message and use simple expressions.					
/23. I use words which are familiar with.					
24. I change my sentence(s) when I feel I cannot get the message across with the first/previous sentence I produced.					
Strategy 6: Nonverbal strategies while speaking					
25. I make eye-contact when I am talking.					
26. I use gestures if I cannot express myself.					
27. I use facial expression if I cannot express what I want to say.					
28. When I can't think of a word, I use mime to try and convey the meaning.					
Strategy 7: Message abandonment strategies					
29. If I face some language difficulties, I leave the message unfinished.					
30. I ask other people to help when I cannot communicate well.					
31. I give up when I cannot make others understand.					
32. I use my talking dictionary to help me communicate when I do not know what to say.					
33. I prefer to remain quiet if I do not know what to say to avoid embarrassing myself.					
Strategy 8: Attempt to think in English strategies					
34. I create the sentence in Thai first and then construct the English sentence.					
35. I think first of a sentence I already know in English and then try to change it to fit the situation.					

Communication Strategies Used to Overcome Speaking Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
Strategy 9: Circumlocution strategies					
36. I describe the characteristics of the object instead of using the exact word when I am not sure.					
37. I create new words when I do not understand how to express myself.					
38. I use key words to replace a whole sentence when I have difficulties conveying my ideas.					

Section 2.2

There are 25 statements in this section, please carefully read each statement and put (√) on the response number (5, 4, 3, 2, or 1) which reflects frequency of technique do you use in order to solve listening problems in English. In each item only one number can be chosen. There is no right or wrong answer to these statements. The criteria for the response are as follows:

5 = Highest frequent use (Always or almost always used)
4 = High frequent use (Generally or often used)
3 = Moderate frequent use (Sometimes or occasionally used)
2 = Low frequent use (Generally not / seldom used)
1 = Lowest frequent use (Never or almost never used)

Communication Strategies Used to Overcome Listening Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
Strategy 1: Negotiation for meaning while listening strategies					
1. I ask for repetition when I cannot understand what the speaker has said.					
2. I make a clarification request when I am not sure what the speaker has said.					
3. I ask the speaker to use easier words when I have difficulties in comprehension.					
4. I ask the speaker to slow down when I cannot understand what the speaker has said.					
5. I make clear to the speaker what I have not been able to understand.					
6. I ask the speaker to give an example when I am not sure what he/she has said.					
Strategy 2: Fluency-maintaining strategies					
7. I pay attention to the speaker's pronunciation, rhythm and intonation.					
8. I send the speaker signals to show my understanding to avoid communication gaps.					
9. Even if I do not understand what the speaker has said, I still try to respond to him/her by saying "Really?", "Is that so?", etc.					
10. I pretend that I understand what the speaker has said, even I do not understand all the details.					
Strategy 3: Getting the gist strategies					
11. I try to catch the speaker's main point if there are too many details.					
12. I guess what the speaker is going to say based on the context.					
13. I guess the speaker's intention based on what he/she said so far.					
14. I guess the speaker's intention by paying attention to the first part of the sentence.					
15. I do not mind if I cannot understand every single detail.					

Communication Strategies Used to Overcome Listening Difficulties	How often do you use each strategy item?				
	5 = Highest frequent use	4 = High frequent use	3 = Moderate frequent use	2 = Low frequent use	1 = Lowest frequent use
Strategy 4: Nonverbal strategies while listening					
16. I use gestures when I have difficulties in understanding.					
17. I pay attention to the speaker's eye contact, facial expression and gestures.					
Strategy 5: Less active listener strategies					
18. I translate into native language little by little to understand what the speaker has said.					
19. I only focus on familiar expressions.					
Strategy 6: Word oriented strategies					
20. I pay attention to the words which the speaker slows down or emphasises.					
21. I guess what the speaker wants to say by catching from familiar words.					
22. I try to catch every word that the speaker uses.					
23. I pay attention to the first word to judge whether it is an interrogative sentence or not.					
24. I pay attention to the parts of speech, such as noun and verb.					
25. When I hear a question, I focus on which question word has been used.					

Appendix B

แบบสอบถามเพื่อการวิจัย

เรื่อง กลยุทธ์การสื่อสารภาษาอังกฤษของนักศึกษาวิศวกรรมศาสตร์ที่ศึกษาใน สถาบันการศึกษาเอกชนในกรุงเทพมหานคร ปีการศึกษา 2558

คำชี้แจง

1. แบบสอบถามฉบับนี้มีวัตถุประสงค์เพื่อสอบถามกลยุทธ์การสื่อสารภาษาอังกฤษของนักศึกษาวิศวกรรมศาสตร์ที่ศึกษาในสถาบันการศึกษาเอกชนในกรุงเทพมหานคร โดยมีรายละเอียดของคำถามดังต่อไปนี้

ตอนที่ 1 ข้อมูลทั่วไป จำนวน 12 ข้อ

ตอนที่ 2 ด้านกลยุทธ์การสื่อสารภาษาอังกฤษ จำนวน 63 ข้อ ตามคุณลักษณะดังนี้

2.1 กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการพูดภาษาอังกฤษ จำนวน 38 ข้อ

2.2 กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการฟังภาษาอังกฤษจำนวน 25 ข้อ

2. โปรดตอบแบบสอบถามตามความเป็นจริงและตรงตามประสบการณ์ของท่านอย่างครบถ้วนทุกข้อทุกตอนไม่เว้นข้อหนึ่งข้อใดไว้ เพราะคำตอบที่เป็นจริงและสมบรูณ์ จะช่วยให้การวิจัยครั้งนี้เกิดประโยชน์อย่างเต็มที่

3. คำตอบของท่านจะไม่มีผลกระทบใดๆต่อตัวท่าน และผลการเรียนของท่านแต่อย่างใดทั้งสิ้น การประมวลผลจะออกมาในภาพรวม เพื่อประโยชน์ในพัฒนาการเรียนการสอนวิชาภาษาอังกฤษ

ขอขอบพระคุณในความอนุเคราะห์ข้อมูลของท่านมา ณ โอกาสนี้

สุภัสสร จินดาไทย

แบบสอบถามนี้สำหรับนักศึกษาคณะวิศวกรรมศาสตร์เท่านั้น

ตอนที่ 1 ข้อมูลทั่วไป

คำชี้แจง ขอให้ท่านใส่เครื่องหมาย ✓ ในช่องด้านล่าง

1. ชื่อมหาวิทยาลัยที่ท่านกำลังศึกษา (กรุณาเลือกคำตอบ)

[ ] มหาวิทยาลัยเทคโนโลยีมหานคร

[ ] สถาบันเทคโนโลยีไทย - ญี่ปุ่น

2. สาขาวิชา / วิชาเอก (กรุณาเลือกคำตอบ)

[ ] วิศวกรรมการผลิต [ ] วิศวกรรมไฟฟ้า

[ ] วิศวกรรมคอมพิวเตอร์ [ ] วิศวกรรมยานยนต์

[ ] วิศวกรรมเครื่องกล [ ] วิศวกรรมโยธา

[ ] วิศวกรรมเคมี [ ] วิศวกรรมระบบวัดคุมและแมคคาทรอนิกส์

[ ] วิศวกรรมความปลอดภัย [ ] วิศวกรรมอุตสาหการ

[ ] วิศวกรรมโทรคมนาคม [ ] อื่นๆ (โปรดระบุ) _____

3. เพศ (กรุณาเลือกคำตอบ)

[ ] ชาย [ ] หญิง

4. อายุ (กรุณากรอกคำตอบเป็นตัวเลข)

_____ปี (เศษ 6 เดือนนับเป็น 1 ปี)

5. ท่านเรียนจบการศึกษาระดับมัธยมศึกษาตอนปลาย หรือเทียบเท่าจากที่ใด (กรุณาเลือกคำตอบ)

[ ] โรงเรียนในกรุงเทพมหานคร

[ ] โรงเรียนในเขตปริมณฑลของกรุงเทพฯ ได้แก่ นนทบุรี ปทุมธานี นครปฐม สมุทรปราการ สมุทรสาคร

[ ] โรงเรียนต่างจังหวัด (โปรดระบุชื่อจังหวัด) _____

6. ท่านมีโอกาสพูดภาษาอังกฤษในชั้นเรียนบ่อยเพียงใด (กรุณาเลือกคำตอบ 1 ข้อ)

[ ] น้อย [ ] ปานกลาง [ ] บ่อย

7. ท่านมีโอกาสพูดภาษาอังกฤษนอกชั้นเรียนบ่อยเพียงใด (กรุณาเลือกคำตอบ 1 ข้อ)

[ ] น้อย [ ] ปานกลาง [ ] บ่อย

8. ท่านคิดว่าท่านมีความสามารถในการพูดภาษาอังกฤษในระดับใด (กรุณาเลือกคำตอบเพียง 1 คำตอบ)

[ ] ดี [ ] พอใช้ [ ] ต้องปรับปรุง

9. ท่านคิดว่าท่านมีความสามารถในการฟังภาษาอังกฤษในระดับใด (กรุณาเลือกคำตอบเพียง 1 คำตอบ)

[ ] ดี [ ] พอใช้ [ ] ต้องปรับปรุง

ตอนที่ 2 ด้านเทคนิคการใช้ภาษาอังกฤษในการสื่อสาร

ตอนที่ 2.1 กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยการพูดภาษาอังกฤษ

คำชี้แจง ข้อความข้างล่างนี้เป็นกลยุทธ์ที่บุคคลมักจะใช้เพื่อช่วยในการพูดภาษาอังกฤษ กรุณาเลือกกลยุทธ์ในการสื่อสารที่ท่านใช้โดยทำเครื่องหมาย ✓ ในแต่ละข้อความ

5 ใช้บ่อยที่สุด
4 ใช้บ่อย
3 ใช้ปานกลาง
2 ใช้น้อย
1 ไม่เคยใช้เลย

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการพูดภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1= ไม่เคยใช้เลย
กลยุทธ์ที่ 1 ด้านอารมณ์และสังคม					
1. ฉันพยายามผ่อนคลายในยามที่รู้สึกตื่นเต้นหรือกังวลใจ					
2. ฉันพยายามที่จะสนุกกับการพูดคุยกับคู่สนทนา					
3. ฉันพยายามทำให้ผู้ฟังเกิดความประทับใจที่ดี					
4. ฉันให้กำลังใจตนเองเพื่อที่จะพูดในสิ่งที่ฉันต้องการให้ได้					
5. ฉันให้กำลังใจตนเองในการใช้ภาษาอังกฤษ แม้จะมีการพูดผิดบ้างก็ไม่เป็นไร					
6. ฉันมักจะเติมคำประเภท “เอ้อ...อ้า... รู้ไหม...”ลงไปในประโยคเพื่อขัดจังหวะ เวลาคิดไม่ออกว่าจะพูดอะไรต่อไป					
กลยุทธ์ที่ 2 ด้านการสร้างความแคล่วคล่องในการใช้ภาษา					
7. ฉันพยายามพูดให้เป็นจังหวะและน้ำเสียงที่เหมาะสม					
8. ฉันระมัดระวังเรื่องสำเนียงการออกเสียง					
9. ฉันพยายามให้การสนทนาต่อเนื่องลื่นไหลไปได้ เพื่อที่จะได้ไม่เกิดความเงียบ					
10. ฉันพยายามพูดให้แคล่วคล่องเหมือนเจ้าของภาษา					
11. ฉันให้เวลากับตัวเองแล้วค่อยๆพูดสิ่งที่ตนต้องการ					

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการพูดภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1 = ไม่เคยใช้เลย
กลยุทธ์ที่ 2 ด้านการสร้างความแคล่วคล่องในการใช้ภาษา (ต่อ)					
12. ฉันพยายามพูดให้ชัดเจนและเสียงดังพอที่จะให้ผู้อื่นได้ยิน					
กลยุทธ์ที่ 3 ด้านการเจรจาสื่อความหมายให้เข้าใจตรงกันขณะพูด					
13. ฉันมักจะซักถามตรวจสอบเพื่อให้มั่นใจว่าผู้ฟังเข้าใจตรงกับที่ฉันต้องการพูด					
14. ฉันจะพูดสิ่งที่ต้องการซ้ำไปซ้ำมา จนกว่าผู้ฟังจะเข้าใจ					
15. ในขณะที่พูดฉันพยายามสังเกตปฏิกิริยาโต้ตอบของผู้ฟังเสมอ					
16. เวลาที่ผู้ฟังไม่เข้าใจสิ่งที่ฉันพูด ฉันจะยกตัวอย่างเพิ่มเติม					
กลยุทธ์ที่ 4 ด้านการเน้นความถูกต้องในการใช้ภาษา					
17. ฉันระมัดระวังเรื่องไวยากรณ์ในระหว่างการสนทนา					
18. ฉันระมัดระวังการลำดับคำในระหว่างการสนทนา					
19. ฉันสังเกตว่าตนเองใช้วลีตรงตามหลักไวยากรณ์ที่เรียนมา					
20. ฉันแก้คำพูดของตัวเองใหม่ เมื่อรู้ตัวว่าพูดผิด					
21. ฉันเน้นการใช้รูปกริยาให้สอดคล้องกับประธาน					
กลยุทธ์ที่ 5 ด้านการลดข้อความและการใช้ตัวเลือก					
22. ฉันมักจะลดข้อความที่จะพูด และเลือกใช้สำนวนง่ายๆ					
23. ฉันใช้คำที่คุ้นเคย					
24. ฉันเปลี่ยนประโยค เมื่อรู้สึกว่าไม่สามารถสื่อสารด้วยการพูดประโยคเดิมให้ผู้ฟังเข้าใจได้					
กลยุทธ์ที่ 6 ด้านการสื่อความหมายโดยไม่ใช้ถ้อยคำขณะพูด					
25. ฉันพยายามสบตาคู่สนทนาเมื่อพูดคุย					
26. ฉันใช้ท่าทางแทน ในกรณีที่ไม่สามารถสื่อเป็นคำพูดได้					
27. ฉันใช้การแสดงออกทางสีหน้า เมื่อไม่สามารถสื่อสารสิ่งที่อยากพูด					
28. เวลาคิดคำไม่ได้ ฉันมักจะแสดงท่าทางแทน					

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการพูดภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1 = ไม่เคยใช้เลย
กลยุทธ์ที่ 7 ด้านการละทิ้งข้อความ					
29. ฉันมักจะพูดได้ไม่ครบข้อความหรือหยุดพูดกลางคัน เมื่อฉันคิดคำที่จะสื่อความหมายไม่ได้					
30. ฉันจะให้ผู้อื่นช่วยเวลาที่ไม่สามารถสื่อสารได้ดี					
31. ฉันจะเลิกพูด เวลาที่ไม่สามารถทำให้ผู้อื่นเข้าใจ					
32. ฉันใช้พจนานุกรมที่ออกเสียงได้ (a talking dictionary) เพื่อช่วยในการสื่อสารเมื่อฉันไม่รู้ว่าจะพูดอย่างไร					
33. เมื่อไม่รู้ว่าจะพูดอย่างไร ฉันคิดว่าการนิ่งเงียบจะดีกว่าการพูดออกไปแล้วขายหน้า					
กลยุทธ์ที่ 8 ด้านความพยายามที่จะคิดกลยุทธ์ในการใช้ภาษาอังกฤษ					
34. ฉันคิดเป็นภาษาไทยก่อนแล้วสร้างประโยคใหม่เป็นภาษาอังกฤษ					
35. ฉันคิดถึงประโยคภาษาอังกฤษที่ฉันรู้จักอยู่แล้ว แล้วพยายามปรับเปลี่ยนให้เข้ากับสถานการณ์					
กลยุทธ์ที่ 9 ด้านพูดอธิบายโดยอ้อม					
36. หากไม่แน่ใจว่าจะใช้คำว่าอะไร ฉันจะบรรยายลักษณะของวัตถุที่พูดถึงนั้นแทน					
37. ฉันคิดคำขึ้นมาใหม่เวลาที่ไม่รู้ว่าจะใช้คำพูดว่าอย่างไร					
38. เมื่อฉันรู้สึกว่าไม่สามารถจะสื่อสารความคิดได้โดยง่าย ฉันจะใช้เฉพาะคำสำคัญแทนการพูดทั้งประโยค					

ตอนที่ 2.2 กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยการฟังภาษาอังกฤษ

คำชี้แจง ข้อความข้างล่างนี้เป็นกลยุทธ์ที่บุคคลมักจะใช้เพื่อช่วยในการฟังภาษาอังกฤษ

กรุณาเลือกกลยุทธ์ในการสื่อสารที่ท่านใช้โดยทำเครื่องหมาย √ ในแต่ละข้อความ

5 ใช้บ่อยที่สุด

4 ใช้บ่อย

3 ใช้ปานกลาง

2 ใช้น้อย

1 ไม่เคยใช้เลย

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการฟังภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1 = ไม่เคยใช้เลย
กลยุทธ์ที่ 1 ด้านการช่วยตีความขณะฟัง					
1. ฉันขอให้ผู้พูดพูดซ้ำ เมื่อฟังไม่เข้าใจในสิ่งที่เขาพูดไปแล้ว					
2. ฉันขอให้ผู้พูดอธิบายเพิ่มเติม เวลาไม่มั่นใจว่าเข้าใจสิ่งที่เขาพูดถึง					
3. ฉันขอให้ผู้พูดใช้คำที่ง่ายขึ้น เวลาที่ไม่เข้าใจสิ่งที่เขาพูด					
4. ฉันขอให้ผู้พูดพูดช้าลง เวลาไม่เข้าใจสิ่งที่เขาพูด					
5. ฉันบอกให้ผู้พูดทราบ ในส่วนที่ฉันไม่เข้าใจ					
6. ฉันขอให้ผู้พูดยกตัวอย่างเมื่อไม่แน่ใจว่าผู้พูดต้องการจะบอกอะไร					
กลยุทธ์ที่ 2 ด้านการรักษาความลื่นไหล					
7. ฉันตั้งใจฟังจังหวะในการออกเสียง และท่วงทำนองน้ำเสียงของผู้พูด					
8. ฉันส่งสัญญาณระหว่างการสื่อสารว่าเข้าใจ เพื่อหลีกเลี่ย งช่องว่างระหว่างการสนทนา					
9. แม้จะไม่เข้าใจว่าคู่สนทนาพูดอะไร ฉันก็พยายามจะโต้ตอบ คู่สนทนาด้วยคำพูด เช่น กล่าวว่า “จริงหรือ”, “เป็นอย่างนั้นหรือ”					

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการฟังภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1 = ไม่เคยใช้เลย
กลยุทธ์ที่ 2 ด้านการรักษาความลื่นไหล (ต่อ)					
10. ฉันแสร้งทำเป็นว่าเข้าใจสิ่งที่คู่สนทนาพูด แม้จะไม่เข้าใจทั้งหมดก็ตาม					
กลยุทธ์ที่ 3 ด้านการจับใจความสำคัญ					
11. ฉันพยายามจับใจความสำคัญให้ได้ แม้จะไม่เข้าใจรายละเอียดทุกคำพูดของคู่สนทนา					
12. ฉันคาดเดาว่าผู้พูดน่าจะพูดอะไรต่อไป โดยอาศัยบริบทช่วย					
13. ฉันพยายามคาดเดาเจตนาของผู้พูดจากสิ่งที่เขาพูดมาแล้ว					
14. ฉันตั้งใจฟังท่อนแรกของประโยค เพื่อเดาต่อว่าผู้พูดต้องการอะไร					
15. ฉันคิดว่าฉันไม่จำเป็นต้องเข้าใจทุกคำพูดที่ผู้พูดสื่อสาร					
กลยุทธ์ที่ 4 ด้านการใช้อวัจนภาษาขณะฟัง					
16. ฉันพยายามแสดงออกด้วยท่าทางในยามที่ฟังไม่เข้าใ จ					
17. ฉันฟังโดยการสบตาและสังเกตสีหน้าและท่าทางของผู้พูด					
กลยุทธ์ที่ 5 ด้านการฟังของผู้เริ่มต้น					
18. ฉันพยายามแปลกลับมาเป็นภาษาไทยทีละนิด เพื่อจะได้เข้าใจสิ่งที่ผู้พูดพูดไปแล้ว					
19. ฉันจับใจความเฉพาะจากศัพท์สำนวน ต่างๆที่คุ้นเคยเท่านั้น					
กลยุทธ์ที่ 6 ด้านการฟังโดยอาศัยคำศัพท์					
20. ฉันให้ความสำคัญกับคำที่คู่สนทนาพูดช้าหรือพูดเน้นเสียง					
21. ฉันเดาว่าผู้พูดต้องการอะไร โดยฟังจากคำที่คุ้นเคย					
22. ฉันพยายามฟังคำทุกคำที่ผู้พูดใช้					
23. ฉันฟังคำแรกของประโยคอย่างตั้งใจ เพื่อจะได้รู้ว่าเป็นประโยคคำถามหรือไม่					

กลยุทธ์ที่ใช้สื่อสารเพื่อช่วยในการฟังภาษาอังกฤษ	ท่านใช้กลยุทธ์ในการสื่อสารในแต่ละข้อนี้บ่อยเพียงใด				
	5 = ใช้บ่อยที่สุด	4 = ใช้บ่อย	3 = ใช้ปานกลาง	2 = ใช้น้อย	1 = ไม่เคยใช้เลย
กลยุทธ์ที่ 6 ด้านการฟังโดยอาศัยคำศัพท์ (ต่อ)					
24. ฉันตั้งใจฟังตรงประธานและกริยาของประโยคมากที่สุดในการฟัง					
25. เมื่อได้ยินประโยคคำถาม ฉันพยายามฟังว่าตัวตั้งคำถามคืออะไร					

ขอขอบคุณที่ท่านสละเวลากรอกแบบสอบถาม

APPENDIX C
Results of Finding One

Table 1 Average Frequency of First-Year Engineering Students' Speaking Strategy Use at a Private University Institute

Speaking Strategies	M	SD	Average Frequency of Strategy Use
1. I try to relax when I feel anxious.	3.76	.83	High
2. I try to enjoy the conversation.	3.64	.86	High
3. I try to give a good impression to the listener.	3.65	.84	High
4. I actively encourage myself to express what I want to say.	3.59	.80	High
5. I encourage myself to use English even though I might make mistakes.	3.63	.92	High
6. I use fillers such as "well, you know", "uh" when I cannot think of what to say	3.46	1.08	Moderate
7. I pay attention to my rhythm and intonation.	3.56	2.36	High
8. I pay attention to my pronunciation.	3.34	.96	Moderate
9. I pay attention to the conversation flow and avoid silence.	3.34	.93	Moderate
10. I try to speak English as fluently as native speaker.	3.28	.95	Moderate
11. I take my time to express what I want to say.	3.37	.91	Moderate
12. I try to speak clearly and loudly to make others heard.	3.53	.83	High
13. I check with the listener to make sure he/she understands.	3.38	.92	Moderate
14. I repeat what I want to say until the listener understands.	3.34	.87	Moderate
15. While speaking, I pay attention to the listener's reaction to my speech.	3.57	.89	High
16. I give example if the listener does not understand what I am saying.	3.54	.93	High
17. I pay attention to grammar during conversation.	2.98	1.03	Moderate
18. I pay attention to word order during conversation.	3.19	.96	Moderate
19. I notice myself using a phrase which fits a grammatical rule that I have learnt.	**2.94**	**.99**	**Moderate**
20. I correct my speech when I notice that I have made a mistake.	3.50	.86	High
21. I emphasis the subject and verb of the sentence.	3.24	.94	Moderate
22. I reduce the message and use simple expressions.	3.77	.93	High
23. I use words which are familiar to me.	**3.99**	**.83**	**High**
24. I change my sentence (s) when I feel I cannot get the message across with the first/previous sentence I produced.	3.70	.89	High
25. I make eye-contact when I am talking.	3.63	.91	High
26. I use gestures if I cannot express myself.	**3.80**	**.97**	**High**
27. I use facial expression if I cannot express what I want to say.	3.56	.87	High
28. When I cannot think of a word, I use mime to try and convey the meaning.	3.77	.91	High
29. If I face some language difficulties, I leave the message unfinished.	3.48	.83	Moderate
30. I ask other people to help when I cannot communicate well.	3.67	.92	High
31. I give up when I cannot make others understand.	3.06	.97	Moderate
32. I use my talking dictionary to help me communicate when I do not know what to say.	3.11	1.08	Moderate

33. I prefer to remain quiet if I do not know what to say to avoid embarrassing myself.	3.03	1.05	Moderate
34. I create the sentence in Thai first and then construct the English sentence.	3.66	.98	High
35. I think first of a sentence I already know in English and then try to change it to fit the situation.	3.52	.87	High
36. I describe the characteristics of the object instead of using the exact word when I am not sure.	3.57	.81	High
37. I create new words when I do not understand how to express myself.	3.20	.96	Moderate
38. I use key words to replace a whole sentence when I have difficulties conveying my ideas.	3.47	.84	Moderate

Table 2 Average Frequency of First-Year Engineering Students' Message Reduction and Alteration Strategies at a Private University Institute

Message Reduction and Alteration Strategies	M	SD	Average Frequency of Strategy Use
22. I reduce the message and use simple expressions.	3.77	.93	High
23. I use words which are familiar to me.	**3.99**	**.83**	**High**
24. I change my sentence (s) when I feel I cannot get the message across with the first/previous sentence I produced.	3.70	.89	High

Table 3 Average Frequency of First-Year Engineering Students' Nonverbal Strategies whilst Speaking Strategies at a Private University Institute

Nonverbal Strategies whilst Speaking Strategies	M	SD	Average Frequency of Strategy Use
25. I make eye-contact when I am talking.	3.63	.91	High
26. I use gestures if I cannot express myself.	**3.80**	**.97**	**High**
27. I use facial expression if I cannot express what I want to say.	3.56	.87	High
28. When I cannot think of a word, I use mime to try and convey the meaning.	3.77	.91	High

Table 4 Average Frequency of First-Year Engineering Students' Social and Affective Strategies at a Private University Institute

Social and Affective Strategies	M	SD	Average Frequency of Strategy Use
1. I try to relax when I feel anxious.	**3.76**	**.83**	**High**
2. I try to enjoy the conversation	3.64	.86	High
3. I try to give a good impression to the listener	3.65	.84	High
4. I actively encourage myself to express what I want to say	3.59	.80	High
5. I encourage myself to use English even though I might make mistakes.	3.63	.92	High
6. I use fillers such as "well, you know", "uh" when I cannot think of what to say	3.46	1.08	Moderate

Table 5 Average Frequency of First-Year Engineering Students' Attempt to Think in English Strategies at a Private University Institute

Attempt to Think in English Strategies	M	SD	Average Frequency of Strategy Use
34. I create the sentence in Thai first and then construct the English sentence.	**3.66**	**.98**	**High**
35. I think first of a sentence I already know in English and then try to change it to fit the situation.	3.52	.87	High

Table 6 Average Frequency of First-Year Engineering Students' Negotiation for Meaning whilst Speaking Strategies at a Private University Institute

Negotiation for Meaning whilst Speaking Strategies	M	SD	Average Frequency of Strategy Use
13. I check with the listener to make sure he/she understands.	3.38	.92	Moderate
14. I repeat what I want to say until the listener understands.	3.34	.87	Moderate
15. While speaking, I pay attention to the listener's reaction to my speech.	**3.57**	**.89**	**High**
16. I give example if the listener does not understand what I am saying.	3.54	.93	High

Table 7 Average Frequency of First-Year Engineering Students' Circumlocution Strategies at a Private University Institute

Circumlocution Strategies	M	SD	Average Frequency of Strategy Use
36. I describe the characteristics of the object instead of using the exact word when I am not sure.	**3.57**	**.81**	**High**
37. I create new words when I do not understand how to express myself.	3.20	.96	Moderate
38. I use key words to replace a whole sentence when I have difficulties conveying my ideas.	3.47	.84	Moderate

Table 8 Average Frequency of First-Year Engineering Students' Fluency-Oriented Strategies at a Private University Institute

Fluency-Oriented Strategies	M	SD	Average Frequency of Strategy Use
7. I pay attention to my rhythm and intonation.	**3.56**	**2.36**	**High**
8. I pay attention to my pronunciation.	3.34	.96	Moderate
9. I pay attention to the conversation flow and avoid silence.	3.34	.93	Moderate
10. I try to speak English as fluently as native speaker.	3.28	.95	Moderate
11. I take my time to express what I want to say.	3.37	.91	Moderate
12. I try to speak clearly and loudly to make others heard.	3.53	.83	High

Table 9 Average Frequency of First-Year Engineering Students' Message Abandonment Strategies at a Private University Institute

Message Abandonment Strategies	M	SD	Average Frequency of Strategy Use
29. If I face some language difficulties, I leave the message unfinished.	3.48	.83	Moderate
30. I ask other people to help when I cannot communicate well.	**3.67**	**.92**	**High**
31. I give up when I cannot make others understand.	3.06	.97	Moderate
32. I use my talking dictionary to help me communicate when I do not know what to say.	3.11	1.08	Moderate
33. I prefer to remain quiet if I do not know what to say to avoid embarrassing myself.	3.03	1.05	Moderate

Table 10 Average Frequency of First-Year Engineering Students' Accuracy-Oriented Strategies at a Private University Institute

Accuracy-Oriented Strategies	M	SD	Average Frequency of Strategy Use
17. I pay attention to grammar during conversation.	2.98	1.03	Moderate
18. I pay attention to word order during conversation.	3.19	.96	Moderate
19. I notice myself using a phrase which fits a grammatical rule that I have learnt.	2.94	.99	Moderate
20. I correct my speech when I notice that I have made a mistake.	**3.50**	**.86**	**High**
21. I emphasis the subject and verb of the sentence.	3.24	.94	Moderate

Table 11 Average Frequency of First-Year Engineering Students' Listening Strategy Use at a Private University Institute

Listening Strategies	M	SD	Average Frequency of Strategy Use
1. I ask for repetition when I cannot understand what the speaker has said.	**3.84**	**.86**	**High**
2. I make a clarification request when I am not sure what the speaker has said.	3.74	.82	High
3. I ask the speaker to use easier words when I have difficulties in comprehension.	3.65	.90	High
4. I ask the speaker to slow down when I cannot understand what the speaker has said.	3.79	.93	High
5. I make clear to the speaker what I have not been able to understand.	3.65	.91	High
6. I ask the speaker to give an example when I am not sure what he/she has said.	3.60	.88	High
7. I pay attention to the speaker's pronunciation, rhythm and intonation.	3.63	.86	High
8. I send the speaker signals to show my understanding to avoid communication gaps.	3.51	.86	High

9. Even if I do not understand what the speak has said, I still try to respond to him/her by saying "Really?", "Is that so?", etc.	3.34	.96	Moderate
10. I pretend that I understand what the speaker has said, even I do not understand all the details.	3.34	1.03	Moderate
11. I try to catch the speaker's main point if there are too many details	3.69	.85	High
12. I guess what the speaker is going to say based on the context.	3.50	.85	High
13. I guess the speaker's intention based on what he/she said so far.	3.61	.86	High
14. I guess the speaker's intention by paying attention to the first part of the sentence.	3.62	.89	High
15. I do not mind if I cannot understand every single detail.	3.41	.93	Moderate
16. I use gestures when I have difficulties in understanding.	3.64	2.30	High
17. I pay attention to the speaker's eye contact, facial expression and gestures.	3.55	.87	High
18. I translate into native language little by little to understand what the speaker has said.	3.69	.92	High
19. I only focus on familiar expression.	3.54	.96	High
20. I pay attention to the words which the speaker slows down or emphasises.	3.59	.82	High
21. I guess what the speaker wants to say by catching from familiar words.	3.68	.84	High
22. I try to catch every word that the speaker uses.	3.54	.94	High
23. I pay attention to the first word to judge whether it is as interrogative sentence or not.	3.57	.89	High
24. I pay attention to the parts of speech, such as noun and verb.	3.56	.86	High
25. When I hear a question, I focus on what question word has been used.	3.71	88	High

Table 12 Average Frequency of First-Year Engineering Students' Negotiation for Meaning whilst Listening Strategies at a Private University Institute

Negotiation for Meaning whilst Listening Strategies	M	SD	Average Frequency of Strategy Use
1. I ask for repetition when I cannot understand what the speaker has said.	**3.84**	**.86**	**High**
2. I make a clarification request when I am not sure what the speaker has said.	3.74	.82	High
3. I ask the speaker to use easier words when I have difficulties in comprehension.	3.65	.90	High
4. I ask the speaker to slow down when I cannot understand what the speaker has said.	**3.79**	**.93**	**High**
5. I make clear to the speaker what I have not been able to understand.	3.65	.91	High
6. I ask the speaker to give an example when I am not sure what he/she has said.	3.60	.88	High

Table 13 Average Frequency of First-Year Engineering Students' Word-Oriented Strategies at a Private University Institute

Word-Oriented Strategies	M	SD	Average Frequency of Strategy Use
20. I pay attention to the words which the speaker slows down or emphasises.	3.59	.82	High
21. I guess what the speaker wants to say by catching familiar words.	3.68	.84	High
22. I try to catch every word that the speaker uses.	3.54	.94	High
23. I pay attention to the first word to judge whether it is as interrogative sentence or not.	3.57	.89	High
24. I pay attention to the parts of speech, such as noun and verb.	3.56	.86	High
25. When I hear a question, I focus on what question word has been used.	**3.71**	**88**	**High**

Table 14 Average Frequency of First-Year Engineering Students' Less Active Listener Strategies at a Private University Institute

Less Active Listener Strategies	M	SD	Average Frequency of Strategy Use
18. I translate into native language little by little to understand what the speaker has said.	**3.69**	**.92**	**High**
19. I only focus on familiar expression.	3.54	.96	High

Table 15 Average Frequency of First-Year Engineering Students' Nonverbal Strategies whilst Listening Strategies at a Private University Institute

Nonverbal Strategies whilst Listening Strategies	M	SD	Average Frequency of Strategy Use
16. I use gestures when I have difficulties in understanding.	**3.64**	**2.30**	**High**
17. I pay attention to the speaker's eye contact, facial expression and gestures.	3.55	.87	High

Table 16 Average Frequency of First-Year Engineering Students' Getting the Gist Strategies at a Private University Institute

Getting the Gist Strategies	M	SD	Average Frequency of Strategy Use
11. I try to catch the speaker's main point if there are too many details	**3.69**	**.85**	**High**
12. I guess what the speaker is going to say based on the context.	3.50	.85	High
13. I guess the speaker's intention based on what he/she said so far.	3.61	.86	High
14. I guess the speaker's intention by paying attention to the first part of the sentence.	3.62	.89	High
15. I do not mind if I cannot understand every single detail.	3.41	.93	Moderate

Table 17 Average Frequency of First-Year Engineering Students' Fluency-Maintaining Strategies at aPrivate University Institute

Fluency-Maintaining Strategies	M	SD	Average Frequency of Strategy Use
7. I pay attention to the speaker's pronunciation, rhythm and intonation.	**3.63**	**.86**	**High**
8. I send the speaker signals to show my understanding to avoid communication gaps.	3.51	.86	High
9. Even if I do not understand what the speak has said, I still try to respond to him/her by saying "Really?", "Is that so?", etc.	3.34	.96	Moderate
10. I pretend that I understand what the speaker has said, even I do not understand all the details.	3.34	1.03	Moderate

APPENDIX D
Further Results of Findings Two to Four

Table 1 T-test Comparing Each Item in Message Reduction and Alteration Strategies between Male and Female First-Year Engineering Students at Private University Institution (N = 361)

Message Reduction and Alteration Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
22. I reduce the message and use simple expressions.	3.78	.93	3.73	.91	.393	.694
23. I use words which are familiar to me.	**3.93**	**.84**	**4.18**	**.77**	**-2.333**	**.020***
24. I change my sentence (s) when I feel I cannot get the message across with the first/previous sentence I produced.	3.69	.94	3.73	.83	-.336	.737

* *Statistical significant at .05 level*

Table 2 T-test Comparing Each Item in Nonverbal Strategies while Speaking Strategies between Male and Female First-Year Engineering Students at Private University Institution (N = 361)

Nonverbal Strategies while Speaking Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
25. I make eye-contact when I am talking.	3.66	.90	3.50	.94	1.414	.158
26. I use gestures if I cannot express myself.	3.78	.97	3.83	.99	-.392	.695
27. I use facial expression if I cannot express what I want to say.	3.53	.89	3.68	.80	-1.339	.181
28. When I cannot think of a word, I use mime to try and convey the meaning.	**3.69**	**.90**	**4.06**	**.92**	**-3.284**	**.001***

* *Statistical significant at .05 level*

Table 3 T-test Comparing Each Item in Message Abandonment Strategies between Male and Female First-Year Engineering Students at Private University Institution (N = 361)

Message Abandonment Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
29. If I face some language difficulties, I leave the message unfinished.	**3.42**	**.84**	**3.69**	**.76**	**-2.604**	**.010***
30. I ask other people to help when I cannot communicate well.	3.66	.92	3.72	.91	-.488	.626
31. I give up when I cannot make others understand.	3.07	.99	3.03	.93	.391	.696
32. I use my talking dictionary to help me communicate when I do not know what to say.	**3.05**	**1.09**	**3.35**	**1.04**	**-2.153**	**.032***
33. I prefer to remain quiet if I do not know what to say to avoid embarrassing myself.	3.02	1.-5	3.08	1.05	-.440	.661

* *Statistical significant at .05 level*

Table 4 T-test Comparing Each Item in Circumlocution Strategies between Male and Female First – Year Engineering Students at Private University Institution (N = 361)

Circumlocution Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
36. I describe the characteristics of the object instead of using the exact word when I am not sure.	3.53	.80	3.69	.83	-1.534	.126
37. I create new words when I do not understand how to express myself.	**3.27**	**.93**	**2.97**	**1.044**	**2.408**	**.017***
38. I use key words to replace a whole sentence when I have difficulties conveying my ideas.	3.50	.83	3.37	.88	1.173	.241

* *Statistical significant at .05 level*

Table 5 T-test Comparing Each Item in Negotiation for Meaning whilst Listening Strategies between Male and Female First-Year Engineering Students at Private University Institution (N = 361)

Negotiation for Meaning while Listening Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
1. I ask for repetition when I cannot understand what the speaker has said.	3.80	.88	3.97	.79	-1.562	.099
2. I make a clarification request when I am not sure what the speaker has said.	**3.69**	**.84**	**3.92**	**.79**	**-2.201**	**.028***
3. I ask the speaker to use easier words when I have difficulties in comprehension.	**3.58**	**.91**	**3.91**	**.83**	**-2.871**	**.003***
4. I ask the speaker to slow down when I cannot understand what the speaker has said.	**3.73**	**.95**	**3.99**	**.85**	**-2.269**	**.025***
5. I make clear to the speaker what I have not been able to understand.	**3.57**	**.01**	**3.95**	**.84**	**-3.517**	**.001***
6. I ask the speaker to give an example when I am not sure what he/she said.	**3.53**	**.88**	**3.85**	**.86**	**-2.805**	**.005***

* *Statistical significant at .05 level*

Table 6 T-test Comparing Each Item in Getting the Gist Strategies between Male and Female First-Year Engineering Students at Private University Institution (N = 361)

Getting the Gist Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
11. I try to catch the speaker's main point if there are too many details	3.67	.82	3.76	.93	-.786	.432
12. I guess what the speaker is going to say based on the context.	3.48	.84	3.55	.88	-.652	.515
13. I guess the speaker's intention based on what he/she said so far.	3.59	.86	3.67	.88	-.696	.487
14. I guess the speaker's intention by paying attention to the first part of the sentence.	**3.57**	**.87**	**3.81**	**.96**	**-2.101**	**.036***
15. I do not mind if I cannot understand every single detail.	3.39	.91	3.47	.98	-.692	.489

* *Statistical significant at .05 leve*

Table 7 T-test Comparing Each Item in Less Active Listener Strategies between Male and Female First-Year Engineering students at Private University Institution (N = 361)

Less Active Listener Strategies	Gender					
	Males		Females			
	Mean	SD.	Mean	SD.	t	P
18. I translate into native language little by little to understand what the speaker has said.	3.66	.90	3.81	.98	-1.283	.200
19. I only focus on familiar expression.	**3.49**	**.93**	**3.73**	**.99**	**-2.020**	**.044***

** Statistical significant at .05 level*

Table 8 Comparing between Circumlocution Strategies and First-Year Engineering Students with Different High School Background at a Private University Institution (N=361)

ANOVA

Circumlocution Strategies		SS	df	MS	F	p
36. I describe the characteristics of the object instead of using the exact word when I am not sure.	**Between groups**	**5.678**	**2**	**2.839**	**4.401**	**.013***
	Within groups	**230.909**	**358**	**.645**		
	Total	**236.587**	**360**			
37. I create new words when I do not understand how to express myself.	Between groups	1.840	2	.920	.995	.371
	Within groups	330.991	358	.925		
	Total	332.831	360			
38. I use key words to replace a whole sentence when I have difficulties conveying my ideas.	Between groups	2.200	2	1.100	1.552	.213
	Within groups	253.745	358	.709		
	Total	255.945	360			

** Statistical significant at .05 level*

Table 9 Comparing between Social and Affective Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Social and Affective Strategies		SS	df	MS	F	p
1. I try to relax when I feel anxious.	Between groups	2.539	2	1.270	1.844	.160
	Within groups	246.447	358	.688		
	Total	248.986	360			
2. I try to enjoy the conversation.	**Between groups**	**5.951**	**2**	**2.975**	**4.141**	**.017***
	Within groups	**257.235**	**358**	**.719**		
	Total	**263.186**	**360**			
3. I try to give a good impression to the listener.	**Between groups**	**10.118**	**2**	**5.059**	**7.496**	**.001***
	Within groups	**241.600**	**358**	**.675**		
	Total	**251.717**	**360**			
4. I actively encourage myself to express what I want to say.	Between groups	2.818	2	1409	2.209	.111

	Within groups	228.141	358	.638		
	Total	231.141	360			
5. I encourage myself to use English even though I might make mistakes.	**Between groups**	**11.795**	**2**	**5.898**	**1.176**	**.001***
	Within groups	**294.205**	**358**	**.922**		
	Total	**306.000**	**360**			
6. I use fillers such as "well, you know", "uh" when I cannot think of what to say.	Between groups	.477	2	.238	.204	.816
	Within groups	419.191	358	1.171		
	Total	419.668	360			

** Statistical significant at .05 level*

Table 10 Comparing between Fluency-Oriented Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Fluency-Oriented Strategies		SS	df	MS	F	p
7. I pay attention to my rhythm and intonation.	Between groups	12.025	2	6.012	1.081	.340
	Within groups	1991.061	358	5.562		
	Total	2003.086	360			
8. I pay attention to my pronunciation.	**Between groups**	**7.151**	**2**	**3.575**	**3.984**	**.019***
	Within groups	**321.292**	**358**	**.897**		
	Total	**328.443**	**360**			
9. I pay attention to the conversation flow and avoid silence.	**Between groups**	**27.361**	**2**	**13.680**	**17.404**	**.000***
	Within groups	**281.409**	**358**	**.786**		
	Total	**308.770**	**360**			
10. I try to speak English as fluently as native speaker.	**Between groups**	**21.568**	**2**	**10.784**	**12.633**	**.000***
	Within groups	**305.611**	**358**	**.854**		
	Total	**327.180**	**360**			
11. I take my time to express what I want to say.	**Between groups**	**12.347**	**2**	**6.173**	**7.683**	**.001***
	Within groups	**287.653**	**358**	**.804**		
	Total	**300.000**	**360**			
12. I try to speak clearly and loudly to make others heard.	**Between groups**	**13.339**	**2**	**6.669**	**10.091**	**.000***
	Within groups	**236.606**	**358**	**.661**		
	Total	**249.945**	**360**			

** Statistical significant at .05 level*

Table 11 Comparing between Negotiation for Meaning whilst Speaking Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Negotiation for Meaning whilst Speaking Strategies		SS	df	MS	F	p
13. I check with the listener to make sure he/she understands.	**Between groups**	**5.629**	**2**	**2.814**	**3.388**	**.035***
	Within groups	**297.380**	**358**	**.831**		
	Total	**303.008**	**360**			
14. I repeat what I want to say until the listener understands.	Between groups	2.243	2	1.122	1.492	.226
	Within groups	269.164	358	.752		
	Total	271.407	360			
15. While speaking, I pay attention to the listener's reaction to my speech.	Between groups	11.925	2	5.963	7.837	**.000***
	Within groups	272.379	358	.761		
	Total	284.305	360			
16. I give example if the listener does not understand what I am saying.	**Between groups**	**8.935**	**2**	**4.468**	**5.250**	**.005***
	Within groups	**304.649**	**358**	**.851**		
	Total	**313.584**	**360**			

** Statistical significant at .05 level*

Table 12 Comparing between Accuracy-Oriented Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Accuracy-Oriented Strategies		SS	df	MS	F	p
17. I pay attention to grammar during conversation.	**Between groups**	**6.873**	**2**	**3.436**	**3.263**	**.039***
	Within groups	**377.027**	**358**	**1.053**		
	Total	**383.900**	**360**			
18. I pay attention to word order during conversation.	Between groups	3.814	2	1.907	2.081	.126
	Within groups	327.998	358	.916		
	Total	331.812	360			
19. I notice myself using a phrase which fits a grammatical rule that I have learnt.	**Between groups**	**11.368**	**2**	**5.684**	**5.993**	**.003***
	Within groups	**339.524**	**358**	**.948**		
	Total	**350.892**	**360**			
20. I correct my speech when I notice that I have made a mistake.	Between groups	4.128	2	2.064	2.841	.060
	Within groups	260.121	358	.727		
	Total	264.249	360			
21. I emphasis the subject and verb of the sentence.	**Between groups**	**15.022**	**2**	**7.511**	**8.890**	**.000***
	Within groups	**302.490**	**358**	**.845**		
	Total	**317.512**	**360**			

** Statistical significant at .05 level*

Table 13 Comparing between Fluency-Oriented Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Message Reduction and Alteration Strategies		SS	df	MS	F	p
22. I reduce the message and use simple expressions.	Between groups	3.011	2	1.505	1.765	.173
	Within groups	305.443	358	.853		
	Total	308.454	.360			
23. I use words which are familiar to me.	**Between groups**	**7.193**	**2**	**3.597**	**5.326**	**.005***
	Within groups	**241.738**	**358**	**.675**		
	Total	**248.931**	**360**			
24. I change my sentence (s) when I feel I cannot get the message across with the first/previous sentence I produced.	**Between groups**	**9.049**	**2**	**4.525**	**5.898**	**.003***
	Within groups	**274.641**	**358**	**.767**		
	Total	**283.690**	**360**			

** Statistical significant at .05 level*

Table 14 Comparing between Message Abandonment Strategies and First-Year Engineering Students with Different Self-Perceived Speaking Ability at a Private University Institution (N=361)

ANOVA

Message Abandonment Strategies		SS	df	MS	F	p
29. If I face some language difficulties, I leave the message unfinished.	Between groups	3.292	2	1.646	2.388	.093
	Within groups	246.758	358	.689		
	Total	150.050	360			
30. I ask other people to help when I cannot communicate well.	**Between groups**	**9.407**	**2**	**4.704**	**5.766**	**.003***
	Within groups	**292.022**	**358**	**.816**		
	Total	**301.429**	**360**			
31. I give up when I cannot make others understand.	Between groups	3.833	2	1.917	2.044	.131
	Within groups	335.701	358	.938		
	Total	339.535	360			
32. I use my talking dictionary to help me communicate when I do not know what to say.	Between groups	5.989	2	2.994	2.575	.078
	Within groups	416.355	358	1.163		
	Total	422.343	360			
33. I prefer to remain quiet if I do not know what to say to avoid embarrassing myself.	**Between groups**	**7.059**	**2**	**3.529**	**3,243**	**.040***
	Within groups	**389.606**	**358**	**1.088**		
	Total	**396.665**	**360**			

** Statistical significant at .05 level*