A STUDY OF NEEDS ANALYSIS OF ENGLISH LANGUAGE FOR AIRCRAFT HEAVY MAINTENANCE MECHANICS

BY

MISS PAWINEE NIAMSUWAN

AN INDEPENDENT STUDY PAPER SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN CAREER ENGLISH FOR
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HEAVY MAINTENANCE MECHANICS

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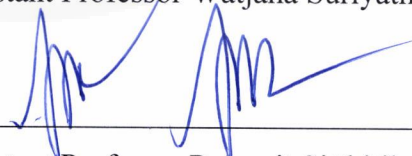the degree of Master of Arts in Career English for International Communication

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Chairman _____

(Assistant Professor Watjana Suriyatham, Ed.D.)

Member and Advisor _____

(Assistant Professor Pragasit Sitthitikul, Ph.D.)

Dean _____

(Associate Professor Supong Tangkiengsirisin, Ph.D.)

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ABSTRACT

English is considered as the global language which people speak internationally. It is widely accepted as the important medium in the international context as people from all over the world use English to suit their objectives, namely, communication, business, and keeping up with advancements. As well as other businesses, English plays an important role in the airline business as the staffs from operation, maintenance, and support employ English in their workplace. Thus, this study was aimed to survey the English language needs of aircraft heavy maintenance mechanics in an airline that has its maintenance facility at Donmuang Airport. The objectives of this study were to disclose the needs of English language used by aircraft heavy maintenance mechanics, the problems as to English language experienced while performing work, and the recommendation for English course development to meet learners' needs. This study was a quantitative research study which employed survey methodology. The questionnaires were launched to collect the data from the participants who were working as the aircraft maintenance mechanics. The results disclosed that listening skills were perceived as the highest need, especially in the area of listening and understanding questions about the job and listening to and understanding lectures from foreign instructors, subsequent skills which were needed were speaking, reading, and writing respectively. Moreover, the results revealed speaking skills as highest score of the problematic areas, especially in

the area of speaking with appropriate word stress and speaking with appropriate word intonation. Subsequent skills which were problematic were listening, writing, and reading, respectively. For the recommendation toward English courses, the study revealed the participants preferred that all four English skills should be taught equally. They prefer to take part in class activities and learn with native instructors.

Keywords: Aircraft Maintenance Mechanics, Needs Analysis, English for Specific Purposes, Aviation English

ACKNOWLEDGEMENTS

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Symbols/Abbreviations	Terms
ESP	English for Specific Purposes
FAA	Federal Aviation Administration
EASA	European Aviation Safety Agency

CHAPTER 1

INTRODUCTION

1.1 Rational of the study

According to Mastin (2012), English has been regarded as the global language. The reach of English all over the world is much more than Latin and French, and English is the language that people speak broadly. English is regarded as a lingua franca in the areas of business, academics, science, computing, education, transportation, politics and entertainment.

Prachanant (2012) suggested that English is the outstanding and significant medium in the international context. There have been people whose primary languages are not English utilizing English language in everyday life. These people are required by the country they are living to use English for external objectives such as the communication purpose, business purpose, or to keep up with advancement in the business area they are doing. What is more, people from various countries are using English as a medium for cultural and idea transfer as well as establishing good relationships.

According to Thailand Board of Investment ([BOI], 2016), The airline industry has been expanding over the last 30 years as a result of increasing needs for travelling worldwide. The numbers of passengers have increased greatly from the early 1980s. It is anticipated that the annual growth rate will be 3.8% in the next 20 years and the number of passengers will reach seven billion in 2034. Looking at the Asia-Pacific region, it has been predicted that the region will dominate global traffic at 42%. Thus, there is tremendous potential and chances ahead since a lot of aviation companies are looking for investment in the Asia-Pacific area. As a result, Thailand's aviation growth rate has been increasing rapidly, which lead to the high growth rate of airline businesses. The increasing passengers and aircrafts leads to the rise in the aircraft maintenance, repair, and overhaul (MRO) sector as well.

English plays an important role in aviation maintenance because the latest aviation community requires services which are reliable and functional. There are many personnel across the globe from operation, maintenance and support who are

concerned with aircraft reliability and functionality. Therefore, the utilization of English can be found throughout the aviation community because of the needs by airlines for trying to improve the quality of manuals and technical documents. Additionally, the aircraft maintenance personnel use technical manuals and documentation as the means of communication, in which thorough understanding is important (Tetiana, 2015).

It is true to say that the language of the aviation community and technical documentation is English. Most of the personnel whose native languages are not English are utilizing English in the aviation community. As a consequence, problems might occur on a daily basis because there are uncountable chances of misunderstanding which could lead to confusion and risk of safety (Tetiana, 2015).

According to Ragan (1997) , there are common relationships in language, specifically in English, which are established properly and obviously embrace aviation as the international domain. Even if English is the lingua franca for aviation, it is not the native language for the people who are utilizing it. It has been reported that the proficiency levels of English are differentiated greatly across the globe. The language background of the citizens could not be taken for granted due to the migration across the globe.

Ragan (1997) further pointed out that the knowledge for aviation English should be extended to other aspects of aviation English, including the crucial aspects, but there was not much attention given to it, such as pilot/ crew or pilot/ copilot communication as well as language utilization during aircraft maintenance. He stated that:

The problem for individuals with limited English proficiency entering and already working in aviation is more acute. These people need more exposure to systematic language study as part of the situational, content- and skill-oriented training that is the norm in the aviation profession (p. 33)

The maintenance personnel could be the cause of human error for the aircraft maintenance process, as Tetiana's (2015) study stated the following:

In aviation, the concepts of " Human Factors" are directly connected to maintenance. During maintenance, a maintainer can do an incorrect task that can cause a malfunction of components and systems, which can have important effects on flight safety and aircraft reliability (p. 4)

Drury and Ma (2005) stated in "Language Error in Aviation Maintenance" that the Federal Aviation Administration (FAA) has put forward a lot of topics about the recruitment of maintenance activity to repair facilities aboard with regard to the shifts in domestic and international Federal Air Regulations. They suggested that "The FAA should establish a method for determining whether language barriers result in maintenance deficiencies. " (p. 2) . What is more, the summary of their research revealed the following:

The typical picture for a language error-prone activity was one with complex tasks and complex instructions, poorly designed documents, users with low ability in English and low familiarity with the task to be performed and with time pressure to complete the task (p. 1)

Drury & Ma (2005) put forward the idea that the ability of writing and speaking English among aircraft maintenance mechanics, auditors, managers, and engineers could be enhanced by providing training and manipulated activity. The corporation should have awareness of the harmful results of time constraints, and awareness of the signals of communication deficiency. The firm should prepare tasks which enable aircraft maintenance mechanics to be acquainted with specific jobs, and the utilization of restricted use of English in shift rotating, and non-routine repair manuals so as to give well-constructed English practice for the mechanics.

For this reason, this study aims to survey the English needs of the aircraft maintenance mechanics and to disclose what they need, what are the problems which hinder them from achieving fluent English language, which will be done through needs analysis. The results from this study will help in designing the English course for them so as to enhance English proficiency based on English for Occupational Purposes, a limb of English for Specific Purposes. Thus, this study is designed to survey the English needs of aircraft maintenance mechanics and will assist to shape the English courses to fulfill their English needs and maximize the ability to communicate in English.

1.2 Purposes of the study

The purpose of this study is to explore the English language needs of aircraft maintenance mechanics for use in daily tasks, by using a questionnaire. Thus, this study aims at exploring the below items:

1. To survey the needs of English language use in aircraft maintenance mechanics.

2. To disclose the problems in using English language for aircraft maintenance mechanics

3. To explore the areas needed for the development of English language courses for aircraft maintenance mechanics.

1.3 Research questions

1. What are the needs of English language use by aircraft heavy maintenance mechanics?

2. What are the problems of English language use by aircraft heavy maintenance mechanics?

3. What is the recommendation for English course development to meet aircraft heavy maintenance mechanics' needs?

1.4 Significance of the study

It is anticipated that the result of this study would provide a thorough understanding as to the needs of English language use and problems of using English language for aircraft maintenance mechanics, which is a significant part of the aircraft maintenance activities. In addition, the results of this study could be used as a contribution for lifting or elaborating the present English courses for aircraft maintenance mechanics. This study may reveal some suggestions for the improvement of the course to the trainer so as to provide more proficient English courses for aircraft maintenance mechanics by tailoring the courses according to their needs.

1.5 Limitation of the study

This study surveys the needs of English language for aircraft maintenance mechanics at an airline that has a maintenance site at Donmuang Airport. The limitation of this study is that it is subject to the respondents' points of view from completing the questionnaire. The finding of this study may not be applied to another group of aircraft maintenance mechanics because this study focuses merely on a group of aircraft maintenance mechanics at Donmuang Airport. Also, the findings of this study may not be applied to other groups of aviation mechanics e.g. line maintenance mechanics or workshop mechanics.

1.6 Basic assumption

The assumption of this study is that all the samples attending this study responded to all items in the questionnaire straightforwardly. Additionally, it is assumed that samples have thoroughly understood the purpose of the questionnaire.

1.7 Definition of terms

1.7.1 Airline: Refers to an organization that provides a regular public service of air transport on one or more routes.

1.7.2 Aircraft maintenance mechanics: Refers to all personnel involved in aircraft or aeronautical product maintenance. They perform their duties with regard to airline policies, procedures, and operations. The aircraft maintenance personnel can be classified in three types as below:

1.7.2.1 Line maintenance mechanics: Refers to the person who performs the job at the outside area of the hangar.

1.7.2.2 Heavy maintenance mechanics: Refers to the person who performs the maintenance of the aircraft with specific training, components, and facilities.

1.7.2.3 Workshop mechanics: Refers to the person who performs the repair of aircraft spare parts in the workshop.

1.7.3 English for Specific Purposes (ESP): Refers to the language approach in which the teaching methodology is subject to learners' specific reasons to learn.

1.7.4 English language needs: Refers to English language requirements of aircraft maintenance mechanics in improving the four main skills and other relevant areas of English.

1.7.5 Needs analysis: Refers to the methodology of collecting data on what learners need and want to study in a topic.

1.7.6 Federal Aviation Administration (FAA): United States' national authority with powers to regulate all aspects of aviation.

CHAPTER 2
LITERATURE REVIEW

This study surveys the needs of heavy maintenance mechanics who work for an airline at Donmuang Airport with regard to the use of English. To provide a concise picture of academic perspectives and information, this chapter includes the literature review and related studies which are the baseline of this study in the aspects of English for Specific Purposes (ESP), Needs Analysis, Aviation English, and Previous related studies.

2.1 English for Specific Purposes (ESP)

This section provides a brief overview of English for Specific Purposes (ESP) in terms of definitions, the emergence of ESP, the development of ESP, ESP teaching purposes, and types of ESP.

As to the definitions of ESP, many scholars have put forward the concepts in various aspects. Otilia (2015) pointed out that "English for Specific Purpose can be defined as teaching and learning English as a second or foreign language for the purpose of using it in a particular domain" (p. 54). Harmer stated that ESP refers to the circumstances in which learners have specific needs to acquire language (as cited in Otilia, 2015, p. 54). Hutchinson and Waters (1987) put forward the idea that "ESP, then, is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning" (p. 19). Streven maintained that "ESP is particular case of general category of special-purpose language training. The same principles apply no matter which language is being learnt and taught" (as cited in Otilia, 2015, p. 54). What is more, almost of the researchers tend to have mutual agreement for these two features of ESP, namely, ESP falls into a specific domain and ESP has a basis of learners' specific needs, Otilia (2015). Tangniam (2006) pointed out in his thesis that English was utilized for communicative purpose internationally which replaced the use of intra-country. A lot of people had a demand for English for their scientific, technical, and commercial purposes, which was called "English for Specific Purposes" (ESP).

ESP has emerged and developed over a period of time. Hutchinson and Waters (1987) stated that the three significant reasons of the emergence of ESP were as follows:

Firstly, after World War II had ended, the world's demand emerged. There had been a growing number of scientists, technicians and economies internationally. The world had been driven by two drives – technology and commerce – which the development of led to the requirement for an international language. English was the predominant language due to the economic status of the United States. As a result, there were a growing number of people who wanted to learn English not because of their enjoyment or elite status, but because English was the prime element to foreign commercial and technological currencies. There were a few that asked questions for the reasons as to learning English and why English was essential. But since English became the significant language of technology and commerce internationally, more and more learners wanted to learn English for specific needs, namely, business persons were learning English for international trade, mechanics were learning English so as to be able to read the technical manual instructions, engineers learned English because they needed to be up-to-date, or doctors learned English for understanding the development of their educational printed materials. They all regarded English as essential and knew the reason why English was very important.

Secondly, linguistics had evolved over the period of time. The emergence of new ideas and the field of language study started. In the former time, the purpose was describing the rules of English utility which was grammar. However, the new study method paid attention to how the language was used in genuine communication rather than the rules of usage. There was a finding which showed the difference in spoken and written language which varied across the context. In the area of English language teaching, there was the increase of thoughts about distinguishing differences among the English of commerce and English for engineering. These thoughts blended automatically with the English syllabus for specific learners. Hutchinson and Waters noted that "the idea was simple: if language varies from one situation of use to another, it should be possible to determine the features of specific situations and then make these features the basis of the learner' course" (p. 7). In summary, the aspects of language in the specific field of work or study could be used to specify the English

needed by specific group of learners. Hutchinson and Waters put forward the idea about principles of ESP that "Tell me what you need English for and I will tell you the English that you need" (p. 8).

Thirdly, is the learner-focused concern. According to Hutchinson and Waters (1987), educational psychology's development was a part of the growth of ESP, stressing the prime importance to learners and their perspective toward learning. Because of their varied needs and focus, these were the impact for learners' motivation and efficiency. The topmost contribution for syllabus development concerned learners' needs and focus. The development of the method in relation to this requirement would make the learner become motivated, cause better and quicker learning, and be efficient.

As to the development of ESP, Hutchinson and Waters (1987) pointed out that since the early 1960s, ESP has passed several steps of development. First of all, ESP was not a global scheme. It has been variously developing in many countries which trial all approaches. There is one aspect called EST (English for Science and Technology) which has been a crucial part for ESP's advancement. Generally, the advancement of EST could be used to show the progress of ESP as well. The below stages describe how ESP has had development over the period of time.

"Register analysis" happened primarily during the 1960s and early 1970s, working on the baseline rules that, for example, English of Electrical Engineering was varied with regard to the register form of English of Biology or general English. The purpose of the analysis was to address the aspects of grammar and lexicon of the register. After that, their features would be further developed to the syllabus of teaching materials. However, Hutchinson and Waters (1987) have stated that:

…register analysis revealed that there was very little that was distinctive in the sentence grammar of Scientific English beyond a tendency to favour particular forms such as the present simple tense, the passive voice and nominal compounds (p. 10).

Hutchinson and Waters (1987) further pointed out that "It did not, for example, reveal any forms that were not found in General English" (p. 10). However, careful attention must be made about the injustice criticism. Even the characteristics of registers of English "per se" had academic interest by its nature, the main drives for

making ESP syllabi were for learners' needs. The supreme significance was given to the language forms that students would encounter, while least significance would be given to the language forms that students would not encounter.

"Rhetorical or discourse analysis" noted the drawbacks of register analysis-based courses. However, the linguistic world had embraced register analysis for development swiftly. In the initial process of development, there had been sentence level-focused ESP. The later process of development changed the focus to beyond sentence level because ESP was found to be tightly concerned with the emergence of discourse or rhetorical analysis. Allen and Widdowson (as cited in Hutchinson and Waters, 1987, p. 10) expressed the common hypothesis that:

We take the view that the difficulties which the students encounter arise not so much from a defective knowledge of the system of English, but from an unfamiliarity with English use, and that consequently their needs cannot be met by a course which simply provides further practice in the composition of sentences, but only by one which develop a knowledge of how sentences are used in the performance of different communicative acts (p. 10-11).

The focus of register analysis was on the grammar in sentence level, and then the focus changed to the combination of sentences to discourse to make meaning. The focus of the research was to address the texts' organizational patterns and address the meaning of those patterns. These patterns would be further developed to the ESP course.

"Target Situation Analysis" did not have new improvement of ESP's knowledge. The objective of this stage was to set the knowledge to be more scientific by a closed to learners' needs process, so learners perform properly in the target situation where the learners could utilize the language they had learnt. Thus, the ESP syllabus involved the address of target situations and pursued the assessment of the linguistic aspects within the situation. The addressed linguistic aspects would later be a part of the syllabus. This method was called "needs analysis." Nonetheless, "target situation analysis" could be used due to it was more close to the involved process. Munby (as cited in Hutchinson and Waters, 1987, p. 12) clarified the target situation analysis system as a form of learner's needs with regard to communication objectives, communicative context, the channels of communication, language skills, utilization,

and structures for detailed schemes. The target situation phase took the definite process of the growing up of ESP. Before that, ESP had gone through the unsystematic process, and then it was made more systemically and learners' needs were to become the heart of the process of designing the syllabus. However, the drawback as to the too simple ideas was shown by Hutchinson and Waters (1987).

"Skills and Strategies" was the earlier analytical process of the development of ESP; it involved outer aspects of language. For example, the register analysis was processed at the sentence level or discourse analysis was processed at the higher level. The target situation analysis was still the same as it was still focused at the outer of linguistic aspects of the target situation. Therefore, this process involved the effort to look at the inner aspects of language and also the contemplating processes which were the baseline for language utility. There were several projects established to handle the study circumstance in which native language was used as a medium, however, the students need to read only English specific texts. Thus, the focus was on reading schemes.

The basic thoughts at the back of skills-centered approach was that at the baseline of every language use there were the steps involving the justification and connotation that help finding the meaning from discourse by ignoring the surface of language. Thus, close attention needed not to be put on the superficial language. Instead, the attention should be put on the interpretative strategies, which would help learners to deal with the superficial aspects of language. For example, the context was used as a clue to meaning. The attention on specific subject registers was less important in this scheme because the baseline steps were not belonging to any specific register.

"A learning-centered approach" was the following development of ESP; proper attention had not been paid to learning. The previous processes that were addressed in the former time had the drawbacks that they were subject to the description of language use. The flaw come in the form of superficial language such as register analysis or the baseline processes such as skills and strategies schemes. The focus should be put on language learning instead of language use. A genuine correct ESP scheme had to have the fundamental of understanding of the language learning process. Thus, the fifth phase for the development of ESP fell to the learning-

centered approach which differentiated between language use and language learning.

2.1.1 ESP teaching purposes

Stern (as cited in Otilia, 2015, p. 54-55) classified ESP teaching purposes as four categories: proficiency, knowledge, affective, and transfer. Firstly, proficiency objectives referred to the accomplishment of four language competences, namely, reading, writing, listening, and speaking. Secondly, knowledge objectives referred to the achievement of language and cultural information. Thirdly, linguistic knowledge objectives referred to the assessment of language and recognized its mechanical features; cultural knowledge objective is the manipulation of the socio-cultural norms. Fourthly, affective objectives referred to the enhancement of the optimistic thoughts toward the area of study. Lastly, transfer objectives was the focus on efficiency to standardize learnt subjects from one circumstance to another.

2.1.2 Types of ESP

Figure 1 shows the structure of ESP. ESP is the pedagogical tool to learn language according to learners' needs, the methodology and the content are subject to what leaners want. According to Hutchinson and Waters (1987), ESP could be separated broadly into two perspectives. One was English for Occupational purposes (EOP) that addressed the needs of English in performance of work-related tasks. The other was English for Educational purpose or English for Academic Purposes (EAP) which concerned the study-related needs of English. However, there was no precise difference as people were able to work and study at the same time. Hutchinson and Waters (1987) pointed out that "it is also likely that in many cases the language learnt for immediate use in a study environment will be used later when the students take up, or returns to, a job" (p. 16). At another level, ESP could be differentiated by the nature of its learners. Under this level three main types were addressed: EST (English for Science and Technology), EBE (English for Business and Economics) and ESS (English for the Social Science). ESS was rare due to people had never thought about the difference of it from the old style humanities-based general English. At the bigger perspective, ESP could be seen as one limb of EFL or ESL, in which they were the core branches of ELT basically. At the same time, ELT was one of the many aspects

of language teaching. Carver (as cited in Tangniam, 2006, p. 11) classified ESP as three types, namely, English as a restricted language, English for Academic and Occupational Purposes, and English with Specific Topics.

"English as a restricted language" was the specific set of language that was used by, for examples, traffic controllers or waiters in restaurants. The reason why this was restricted was because it could determine the situation specifically according to the user needs. Nonetheless, it was not the language due to its very specific characteristic and the knowledge of restricted language would not enable the learner to use it efficiently for new or unusual circumstances or different contexts from the occupational environment.

In "English for Academic and Occupational Purposes" Hutchinson and Waters (as cited in Tangniam, 2006, p. 11) divided ESP into three categories which are English for Science and Technology (EST), English for Business and Economics (EBE), and English for Social Studies (ESS). For every subject area there were two categories inside, namely, English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). EAP and EOP could not be separated obviously because the work and study process happened at the same time. The language which students achieved during the learning period could be used later once they would be in the working phase.

"English with Specific Topics" Carver (as cited in Tangniam, 2006, p.13) stated that there was a change of emphasis to the purpose at this type of ESP. This genre of ESP was regarded as the estimation of the learners' need for the future. This is inseparable from ESP and was considered as the subset of ESP.

2.2 Needs analysis

According to Iwai *et al.* (as cited in Songhori, 2008, p. 2), needs analysis commonly was known as the activities which were concerned about information gathering and would be the foundation for the development of curriculum so as to meet specific student or group's needs. Otilia (2015) stated that needs analysis had differentiated over the decades. At the early stage, needs analysis comprised the basis for learners' communicative needs assessment and the basis for developing techniques for pedagogical purposes.
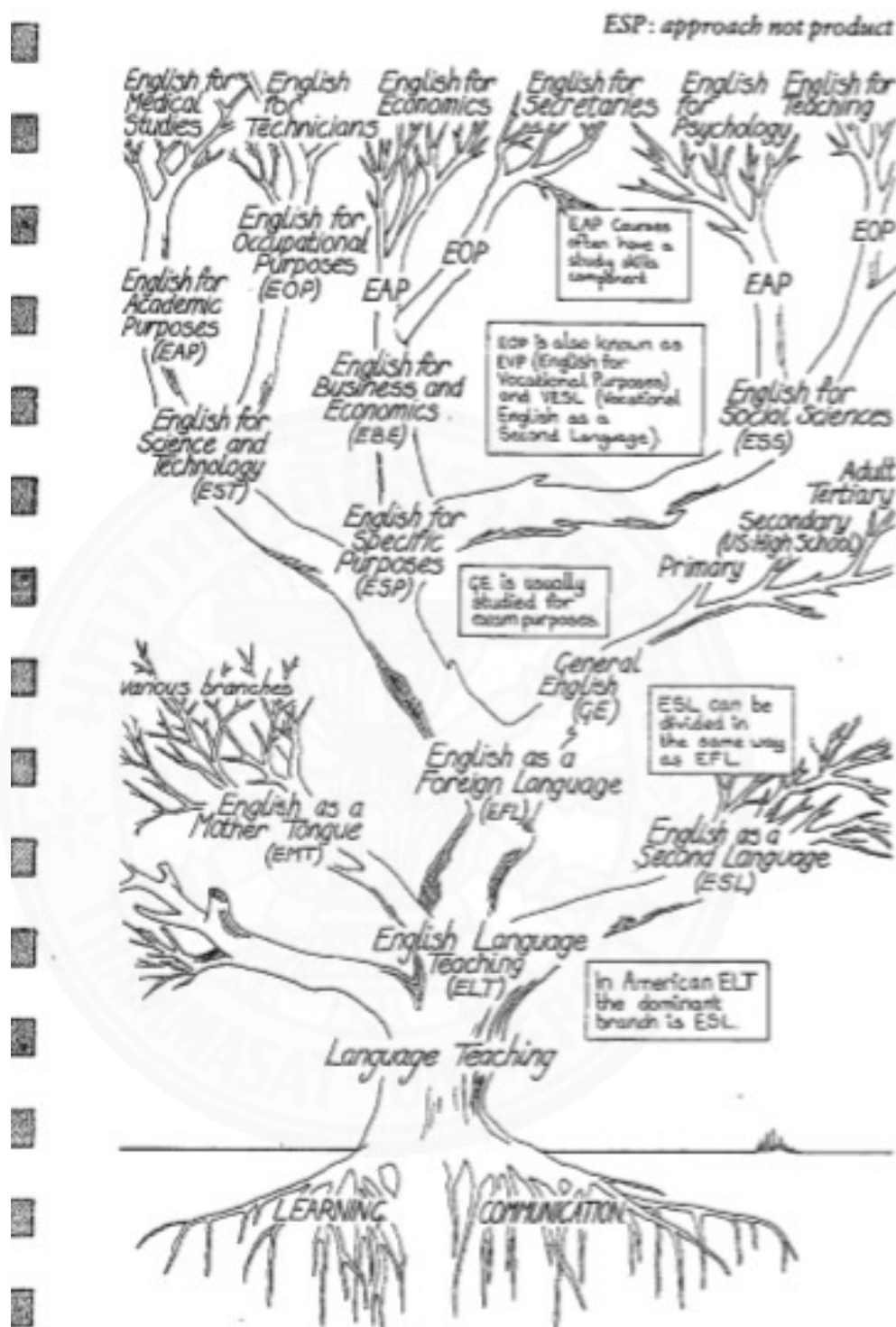
Figure 1. The tree of ELT, Hutchinson and Waters (1987), p. 17.

Presently, there is complexity in the needs analysis process, as the purposes are learners' data collection and to specify the target situation and context for studying. Iwai *et al.* (as cited in Mehdi, 2008, p. 3) put forward the idea that the official needs analysis was considered new to the language teaching environment but the unofficial needs analysis had been carried out for the assessment of students' needs by teachers. It seemed that the emergence of various approaches was due to the aim of teachers for satisfying the needs of their students.

Richterich and Chancerel stated that needs analysis has emerged in the learning environment for 20-30 years. Needs analysis had tremendous impact in ESP courses and was regarded as a prior condition to any course design (as cited in Li, 2014, p. 1869). Dudley-Evans and St John maintained that needs analysis also be regarded as one of the prime elements in ESP, while course design, determination, and launching of course equipment, teaching and learning, and assessment come after (as cited in Li, 2014, p. 1869). Brown referred to needs analysis as processes of data collection which aim at course development so as to meet the needs of specific groups of learners. Well-addressed needs can act as the foundation for preparing assessments, materials' collection, determining teaching action, and assessment of the scheme, together with re-assessing the correctness and transparency of the original one (as cited in Li, 2014, p. 1869).

A needs analysis is crucial in designing the ESP course. The observation and awareness of the data would lead to performance characteristics and outline the learner's capability. There were two features. Boon-Long (n.d.) stated that "The two aspects differ: the end- what the learners are expected to cope with and understanding of a specific topic, and the means- what the learners require in order to cope." (p. 29) The means would be the indicator for performance brought by learners on the new topic, and activated learner's interpretation with regard to coming knowledge. Thus, this indicator would be the foundation for the overall teaching and learning process and ESP material transcription. It was the starting point for transferring the acquired knowledge between teacher and students and the data obtained would be embraced as the foundation of emerging knowledge.

There are two official methods for compiling essential information regarding the learners' needs identification so as to launch the effective course design. One is

the questionnaire and the other is the well-structured and designed interview. For the questionnaire, it is highly recommended that all of the issues which needed to be explored have to be tailored in advance so as to minimize the time of processing. After that, the prototyped questionnaire should be run through a pilot study for the clarification and complete information. For the interview, it comprises the common pattern and objective with the questionnaire. However, it has the comparative advantage that the questionnaire does not have. For example, there are no questions which are unanswered. It allows the interviewer to make clarity of the misunderstanding from questions' translation or of the unexpected issues which occur during the interview process (Boon-Long, n.d.).

2.2.1 The approach of needs analysis

According to Duddley-Evans and St. John (as cited in Otilia, 2015, p. 54), the present concepts of needs analysis comprised eight characteristics, divided in five major domains. Firstly, target situation analysis and objective needs analysis which focused on learner's utilization of tasks and activities. Secondly, linguistic analysis/ discourse analysis/ genre analysis which has the basis of the utilization of language and skills in a target domain. Thirdly, subjective needs analysis which refers to a basis of a learner's specific needs and the way that contributes to the needs factors of learners such as past experience, justification for taking a course, and anticipation. Fourthly, present situation analysis which focuses on the aim of specifying learning skills and utilization of language. And lastly, means analysis which emphasizes the context's information; where the course is held.

Li (2014) gathered the ideas from a number of scholars. The remarkable models of needs analysis which were widely accepted by researchers consisted of four types. Each type addresses the needs in various aspects.

Target Situation Analysis (TSA): Hutchinson and Waters addressed that target situation is the circumstance of the learner of language utilizing what they have learnt (as cited in Li, 2014, p. 1869). Robinson maintained that the prime attention of TSA is one type of needs analysis which pays attention to students' needs at the post-course stage (as cited in Li, 2014, p. 1869). The target needs can be identified as the outcome of TSA. The address of TSA is crucial for course's design. Thus, the systematic

scrutiny of the language aspects in specified circumstance should be in place. That aspect will shape the course. The data obtained from the TSA comprise the data on the application of language, communication competency, the recognition of the teaching purposes, active parties and societies. Munby formulated the well-known "Communication Needs Processor (CNP)" which maintains a set of questions about communicative elements such as subject, attendees, media, etc. (as cited in Li, 2014, p. 1870). Hutchinson and Waters suggested that these elements can be employed to address the target needs of the learners (as cited in Li, 2014, p. 1870).

Present Situation Analysis (PSA): It is said that TSA deals with the analysis of learners' targets. In contrast, the Present Situation Analysis (PSA) is the analysis of learners' present circumstance and reveals the difference among the present circumstance and the target one. As to the students' motivation toward learning, the regard of students toward learning cannot be abandoned. Robinson put forward the idea that PSA discloses the language ability among students when initializing the course together with their potential and drawbacks (as cited in Li, 2014, p. 1870). Richterich and Chancerel raised three basic components, namely, the students' data, the language teaching institution, and the user's organization. Hutchinson and Waters revealed some cases and suggested that there is no significant correlation between the learners' desires and the needs. These were noticed by the teachers or supporters. Bloor pointed out that needs analysis could come in the form of learner-oriented or target-oriented. The learner-oriented needs analysis deal with what learners can achieve when initializing the course and the obstacles faced during the learning processes. In contrast, the target-oriented needs analysis pays attention to the learner function ahead at the target circumstance and is keen to address the expertise and understanding required for learners. The target-oriented and learner-oriented are in line with Target Situation Analysis and Present Situation Analysis. Bloor further suggested that in order to address the suitable pedagogical materials, it is advisable to employ target-oriented and learner-oriented at the same time.

Hutchinson and Waters (1987) initially launched the learning-centered approach needs analysis. This model includes target situation needs and learning needs. The target situation needs are comprised of necessities, lacks, and wants. The enquiry in the target situation specified the necessities. The essential needs put the

learner to perform efficiently in the target situation. Lack can be referred to as the different necessities and the existing knowledge of the learners. Wants is learners' own desires which are independent from the teacher and course preparers' perspective. Leaning needs is the way in which learners obtain the language.

Dudley-Evans and St John's Model of Needs Analysis:
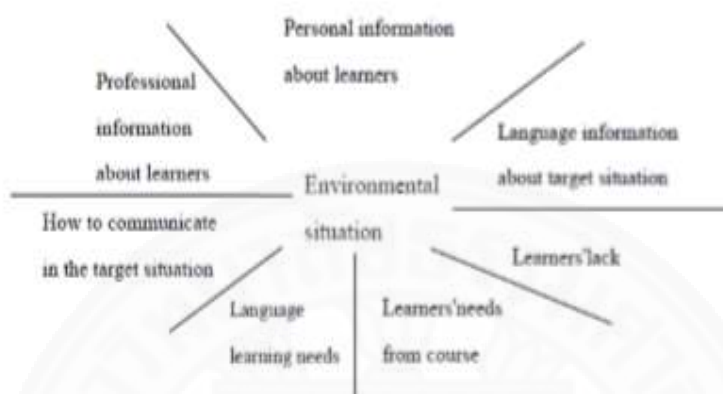
Figure 2. Dudley-Evans & St John's Model of Needs Analysis (as cited in Li, 2014, p. 1871)

Looking at the model, the professional information referred to the jobs and functions in which learners are utilizing English. This is a mutual concept of learners' Target Situation Analysis and objective needs. The personal information deals with the elements which impact how the students learn language, for example past education, the ethnic background, or perception toward English. These can be regarded as learners' own desires which comprise learners' needs, medium, and schemes. The learners' present competencies of English are grouped in the Present Situation Analysis and it is believed to be the efficient way to anticipate the lack, which is the difference between the English language dataset of learners and the professional dataset of learners. The primary focus aims at disclosing the powerful methods for language learning and competencies. Professional communicative dataset deals with the way in which language and skills are employed in the target situation.

Richterich, Chancerel, and Robinson suggested that through the syllabus processes, the students' perception and behavior may be changed. It is advisable to implement the needs analysis during the overall progress (as cited in Li, 2014, p. 1871). What is more, needs analysis can be utilized at the various processes of

syllabus design and the address of needs shall be performed continuously, Richterich and Chancerel (as cited in Li, 2014, p. 1871).

2.3 Aviation English

Ragan (1997) gave the description of aviation English as "The range of types of language uses in aviation is as great as in any human endeavor that involves the full range of human emotions, physical skills, and complex technical knowledge" (p. 26). Speaking about aviation English, what comes to mind would be the picture of a pilot communicating with an air traffic controller with the standardized procedure and set of language. Nonetheless, there is something more about aviation English. Aviation deserves a more careful watch due to its concern with safety, both in-flight and with aircraft maintenance. The false and incorrect use of language could cause fatalities.

According to Ragan (1997), aviation English use covered various sections. Firstly, flight concerning Air Traffic Control and Flight Services. Secondly, technology concerning Airframe and Powerplant Mechanics, Avionics, Aircraft Manufacture, and Flight Line Operations. Thirdly, engineering concerning Aeronautical Engineering and Aerospace Engineering, Next, business concerning Airline/Charter Services, Fixed Based Operations, Airport Management, and Marketing. Lastly, Education/Training concerning Flight, Maintenance, Engineering, and Business Administration.

According to Ragan (1997), the necessity was ahead of us to learn more in another area of aviation English. The other crucial sections which have been less-focused on such as pilot/crew, pilot/co-pilot exchanges, or non-flight utilization e.g. aircraft maintenance should receive greater focus as well.

2.4 Previous related studies

Tatti (2007) explored the needs of Thai dance instructors of the College of Dramatic Arts, Bangkok for their utilization of the English language so as to develop a course syllabus to suit their needs and enhance their advancement. The subjects were Thai dance instructors from the Thai dance department. The results showed listening and speaking skills were the most important and were recommended to be emphasized and the writing skill was rated at the lowest needs. Another result showed

that a specific course for Thai dancers for utilization of communication while performing at international dance tours should be implemented. Speaking about the instructors, the respondents preferred native English speaking teachers with assistance from Thai teachers for focusing on training in speaking skills.

Thatphaiboon (2014) explored the language needs of Thai teaching assistants in international schools in Bangkok so as to uncover the main English skills which were used and addressed the problems using them in another perspective. What is more, the disclosure of English skills needed will assist for the improvement of the respondents' language to deal with occupational requirements. The questionnaire was used to collect information from three groups; which consisted of English native speaking teachers, students, and Thai teaching assistants. The results showed that Thai teaching assistants used speaking skills the most for information and instructions giving. The lower-ranked skills were listening, reading and writing accordingly. The most difficult subject to explain in English was Science, followed by Numeracy, Literacy, and Humanities. Results from the study showed speaking skills were most needed. The listening skill, reading skill, and writing skill followed respectively.

Prachanant (2012) investigated the needs, functions and problems of English language. The subjects were 40 employees from the tourism industry. A questionnaire was used and the data was processed through statistical tools, namely, frequency, percentage, mean, and standard deviation. The findings showed speaking was the most important, followed by listening, reading, and writing respectively. The most related utilizations of English in their industry were providing information, giving services, and offering help, respectively. Their problems of using English were incapable of understanding the English accents, wrong words choice and expressions, improper terminology, and the deficiency of grammar knowledge.

Vahdany and Gerivani (2016) explored the English language needs among medical students and general practitioners under the EFL context. The participants were 110 students from the Medical Sciences of Guilan University who has passed the general English and English for Medical purposes courses, 40 general practitioners who graduated from Guilan University, 3 EFL teachers and 12 subject-matter teachers. The finding revealed that practitioners and medical students regarded reading skills as important, followed by writing skill. Speaking skills were regarded as

least important. General practitioners had higher needs for English language than medical students because the needs of medicine students altered according to time and context. Thus, the instructor should explore the actual needs of learners so as to shape the quality of courses as to learner changing needs.

Youngyuensin (2015) explored the needs of Thai Employees of Yusen Logistics (Thailand) Co. , Ltd among Ocean Freight Forwarding Group of Yusen Logistics (Thailand) Co., Ltd., so as to provide the suitable course as per learners' needs. The participants were 40 employees from Ocean Freight division. The survey questionnaire and semi-structured interview were used. The questionnaire had four parts, namely, background information, English background, difficulties as to English, and the needs for English skills improvement. The interviews were finished in one week and the questions on the interview were from the outcome of the questionnaire. The finding showed writing skills were regarded as number one as to being problematic, followed by speaking. What is more, the results revealed participants would like to extend their area of advancement in business writing, grammar, and vocabulary so that they could perform work. To maximize the efficiency and effectiveness, the firm should pay attention to the learners needs when creating the language course.

Eamjoy (2015) explored the needs and obstacles of Thai secretaries in using English communication skills in the workplace and to specify the correlation among English communication ability and career opportunities. The mixed-method design was used with the subjects being 50 secretaries at the Women Secretaries and Administrative Professionals Association of Thailand (WSAT) and 10 superiors. The questionnaires and interviews were used. The data analysis tools comprised of SPSS and T-test. The finding showed English listening and writing skills were regarded as most needed, while listening skills was the main problem because of the speakers' accents. In conclusion, the English communication skills were essential for secretaries' career paths and the finding should make the awareness of the importance of English Communication so as to compete accordingly.

Srisawat (2015) disclosed the thoughts of employees toward English communication skills as well as the importance of English at workplaces and the needs for English communication skills improvement. The subjects were 30 customer

service staffs who work at a call center for a cellular network company in Thailand. The research instrument was a four point Likert scale questionnaire. The results revealed the subjects' thought that they have mastered main part of the significant skills for their job. Nonetheless, the English communication skills were needed by subjects for improvement.

Chamnankit (2015) measured the English proficiency of 50 front office staff who worked at boutique hotels at Sukhumvit area. The research instrument was the questionnaire so as to collect data. The questionnaire comprised of four parts, namely, listening, speaking, writing, and reading. The questionnaire was submitted and completed within same day. The SPSS software was used to analyze data. The finding revealed the ability to communicate in English for subjects was at fair level due to the difficulties of using English, for example, pronunciation and specific vocabulary. Speaking was regarded as the most significant skill, while writing was regarded as the least significant one. Thus, the speaking skills were needed for improvement so as to communicate with customers effectively. The results from findings could enhance the boutique hotel's management as this helps the employees in terms of English skills development.

Siwayingsuwan (2015) explored the needs and problems in using English for listening and speaking skills among tourist police officers (TPOs) so as to enhance English proficiency and communicate with foreign tourist effectively. The research instruments were a questionnaire with checklist questions and five-point Likert scale. The subjects were 50 TPOs who worked at Suvarnabhumi Airport. The questionnaire and data collection were completed in March 2016. SPSS program was used to analyze the data as well as the descriptive statistics, namely, percentages, frequency, rank, mean score, and standard deviation. The findings showed English speaking and listening were regarded as highly important. Listening was highly needed because the TPOs' work was about listening to tourists' questions, complaints, and telephone conversations. Also, speaking was considered the most significant due to TPOs' job which concerned giving immigration and customs information, telephone conversation, offering tourist information, and describing people. As to the problems, the findings showed the main factors were the difficulties in listening and speaking skills. As to listening skills, it was reported that the TPOs were incapable of words or

conversations' translation and they are unable to recognize the complete information. As to speaking skills, it was reported that subjects had difficulties in English pronunciation, word stress, and speaking English in complete sentences, respectively. The findings from this study could be used for designing appropriate training programs for listening and speaking skills' improvement for the beneficial outcome of the organization as well as development of teaching materials with regard to the English training courses so as to maximize the efficiency for the learning of English among TPOs.

CHAPTER 3
METHODOLOGY

This chapter discusses the subjects, the materials, the procedures employed for data collection and analysis, and the data analysis.

3.1 Subjects

This study was intended to survey the English language needs and problems of aircraft heavy maintenance mechanics at an airline in Bangkok. The participants of this study were 73 aircraft heavy maintenance mechanics who were obtained by using simple random sampling from the total number of the population, 89 aircraft maintenance mechanics. A simple random sampling method using Yamane's (1967) formula was utilized to select the subjects as per below:

$$n = \frac{N}{1 + Ne^2}$$

n = sample size

N = the number of population

e = acceptable allowance error (5% or 0.05)

Thus, the calculation of sample size of heavy maintenance mechanics was as follows:

$$n = \frac{89}{1 + 89(0.05)^2}$$

Thus, the sample size of heavy maintenance mechanics was 72.80 or 73 personnel.

The participants' age ranged from 21-59 years old. More than half of them were aged between 20-29 years. The majority of them were male and have been working with the company less than five years. The educational level of most of the participants was bachelor degree.

3.2 Materials

The research instrument incorporated in this study was a questionnaire which was adopted from Tatti (2007) who conducted a research titled: *A study of the needs of Thai Dance Instructors in using the English language as a basis for course design*. The reason for selecting this questionnaire was because it elicited the useful functions as to English language and these functions could be applied to the work functions of aircraft heavy maintenance mechanics. Moreover, this questionnaire utilized beneficial questions as to course design and development and it examined the research questions. The questionnaire was comprised of three parts as below:

Part I: This part consisted of 15 questionnaire items which intended to disclose the general information of the respondents. This part aimed at exploring the respondents' background information, namely, age, sex, educational background, length of work, the importance of English in their duties, the attitude about sufficient English course provided, the previous English course participation, the interaction with foreigners, the communication with foreigners, the travel abroad to perform work, the self-improvement areas of English, and the self-rating proficiency level of English in all four fundamental skills.

Part II: This part consisted of 46 questionnaire items which intended to elicit the respondents' opinion about English needs and problems of using English every day at work. The respondents were asked about English needs and problems for the four skills, namely, listening, speaking, reading and writing. What is more, the functions with regard to English usage in four essential English skills were asked. The five points Likert scale was utilized to address the English needs and problems as seen in the scale below:

5 – Extremely, 4 – Mostly, 3 – Moderately, 2 – Slightly, 1 – Least

Part III: This part contained 14 questionnaire items which revealed the subjects' points of view and recommendations about teaching and learning activities for the aircraft maintenance mechanics' English course. The questions were about teaching and learning, materials, course length, course time, date and time needed, and teachers needed for aircraft maintenance mechanics. The five points Likert scale was used as follows:

5 – Strongly agree, 4 – Agree, 3 – No opinion, 2 – Disagree, 1 – Strongly disagree

Moreover, this part consisted of respondents' suggestions as to course design which would better serve their needs.

3.2.1 Reliability of questionnaire

The first drafts of the questionnaire were distributed to four mechanics at an airline in Bangkok. The purpose was to verify understanding of the content by the respondents. Once the questionnaires were returned, the reliability coefficient checking was performed by using the Cronbach Alpha function in SPSS statistical program to measure the coefficient level of needs and problems of English language use among aircraft heavy maintenance mechanics. The reliability coefficient received was the acceptable level for high reliability, the Cronbach Alpha values for needs and problems as to English language functions were .975 and .983, respectively. These results showed that the questionnaire was reliable, then they were launched to the rest of mechanics, accordingly.

3.2.2 Validity of translated questionnaire

The validity of the translated questionnaire was done by providing questionnaires to two colleagues who were studying Master of Arts, Career English for International Communication for verifying the content correlation of the translated questionnaire between Thai and English language.

3.3 Procedures

This section concerns the data collecting procedures. In this study, the population consisted of 86 males and 3 females working as the aircraft heavy maintenance mechanics for an airline in which the maintenance activities were performed at Donmuang Airport. The reason why this group of population was chosen was because their role was crucial to aircraft maintenance activities, but no empirical studies had been conducted to explore the needs of language for them. Thus, the results of this study may be useful for the understanding of needs and problems of English usage in the aircraft maintenance functions. The questionnaires were sent to the superior of the department, then passed to the heavy maintenance

mechanics. The subjects were explained the objectives and purposes of the questionnaire so as to have the mutual understanding and to open room for clarification for the questions that they did not understand. The data collection process took three days for the completion due to the unequal working schedule of each mechanic. However, the exact number of subjects was 62 aircraft heavy maintenance mechanics who completed and returned the filled questionnaires. Despite the total 73 sets of questionnaire distributed, it was difficult to collect all the total number of participants because they are working different shifts to support the continuity of aircraft maintenance.

3.3.1 Research design

This study is a quantitative study in which survey methodology was utilized to specify the English needs of aircraft maintenance mechanics in an airline in Bangkok. The questionnaire was adopted from Tatti (2007) who conducted a research titles: *A study of the needs of Thai Dance Instructors in using the English language as a basis for course design* because the design of the questionnaire was in line with the aircraft maintenance language and job functions.

3.3.2 Research context

This study focused on the group of aircraft heavy maintenance mechanics who work for an airline who have the maintenance site at Donmuang Airport, Thailand. The maintenance site at Donmuang Airport is the main base which consists of the aircraft heavy maintenance mechanics of the airline.

3.4 Data analysis

All the data from this study was analyzed using Statistical Package for Social Sciences (SPSS). The descriptive statistics, namely, percentage, frequency, mean, and standard deviation were used and explained as they revealed the participants' responses to surveyed items so that the research questions were answered. For questionnaire part one, the frequency, percentage, and means were used to analyze the questionnaire. As to questionnaire parts two and three, means and standard deviations were used to analyze for the results.

CHAPTER 4

RESULTS AND DISCUSSION

In this section, the research subjects, research materials, procedures, and how to analyze the data are explained. This chapter provides the findings on the language needs and problems of the aircraft heavy maintenance mechanics who work for an airline that has its maintenance facility at Donmuang Airport. The findings were received from the total number of 62 completed questionnaires and were described with tables with descriptive statistics, namely, frequency, percentage, mean, and standard deviation.

4.1 Background information

The participants of this study were 62 aircraft heavy maintenance mechanics who work for an airline in Bangkok. This part shows the participants' age, sex, educational background, length of work, the importance of English in their job function, the attitude about sufficient English course provided, the previous English course participation, the interaction with foreigners, the self-improvement areas of English, and the self-rating proficiency level of English.

Table 1 *Background information*

Background information	*n*	*%*
Age		
20-29	34	54.8
30-39	22	35.5
40-49	6	9.7
Total	**62**	**100**
Gender		
Female	6	9.7
Male	54	87.1
Total	**60**	**96.8**
Education		

(table continues)

Table 1 *Background information (continued)*

Background information	n	%
Below Bachelor Degree	18	29
Bachelor Degree	42	67.7
Master Degree	2	3.2
Total	**62**	**100**
Length of Work		
1-5 years	41	66.1
6-10 years	8	12.9
11-15 years	8	12.9
16-20 years	5	8.1
Total	**62**	**100**
Importance of English		
Important	61	98.4
Not important	1	1.6
Total	**62**	**100**
Sufficient English Courses		
Sufficient	4	6.5
Not sufficient	56	90.3
Total	**60**	**96.8**
Last time attending course		
0-3 years	12	19.4
10-12 years	1	1.6
Total	**13**	**21**
Welcome foreigner		
1-3 times	10	16.1
4-6 times	5	8.1
7-10 times	3	4.8
More than 10 times	1	1.6
No	43	69.4

(table continues)

Table 1 *Background information (continued)*

Background information	*n*	*%*
Total	**62**	**100**
Communicate with foreigner		
1-3 times	20	32.3
4-6 times	6	9.7
7-10 times	3	4.8
More than 10 times	3	4.8
no	28	45.2
Total	**60**	**96.8**
Travel to perform work abroad		
1-3 times	7	11.3
7-10 times	3	4.8
No	52	83.9
Total	**62**	**100**
Study at		
AUA	9	14.5
British Council	2	3.2
ECC	3	4.8
Language Institute	7	11.3
Others	2	3.2
Total	**23**	**37**
Self-study		
Reading English book	31	50
Listening from Internet	31	50
Speaking with foreigner	14	22.6
Reading magazine	11	17.7
Newspaper	7	11.3
Music	47	75.8
Movie	37	59.7

(table continues)

Table 1 *Background information (continued)*

Background information	*n*	*%*
Others	1	1.6
Rate Listening competency		
Not good	13	21
Fair	41	66.1
Good	5	8.1
Excellence	3	4.8
Total	**62**	**100**
Rate Speaking competency		
Not good	23	37.1
Fair	32	51.6
Good	5	8.1
Excellence	2	3.2
Total	**62**	**100**
Rate Reading competency		
Not good	9	14.5
Fair	33	53.2
Good	17	27.4
Excellence	3	4.8
Total	**62**	**100**
Rate writing competency		
Poor	3	4.8
Not good	12	19.4
Fair	36	58.1
Good	10	16.1
Excellence	1	1.6
Total	**62**	**100**

Table 1 shows the background information of the participants. For participants' age, 34 of them were aged between 20-29 years (54.8%), 22 of them were aged between 30-39 years (35.5%), and six of them were aged between 40-49

years (9.7%). As to the number of participants, males were 54 (87.1%), and six females (9.7%) with anonymous gender of two participants (3.2%). With regard to the level of education, 42 out of 62 participants earned a bachelor degree (67.7%), followed by 18 participants with educational background below bachelor degree (29%), and two of them earned master degree (3.2%). For work duration, 41 out of 62 participants have been working with the company for one to five years (66.1%). Eight of them have work duration six to ten years (12.9%), which is equal to 11-15 years (12.9%). Five of them have length of work at 16-20 years (8.1%).

61 participants rated English as important (98.4%). Fifty-six of them thought that the English courses provided were not sufficient (90.3%). With regard to the last time of attending a course, 12 participants reported that they attended a course in the last zero-three years (19.4%), one of the participants reported that they attended the course ten to twelve years ago (1.6%), and 49 of them have not reported the last time attending a course (79%).

With regards to the interaction with foreigners, 10 participants reported that they had welcomed foreigners while performing work one to three times (16.1%), five participants reported that they welcomed foreigners during work four to six times (8.1%), three participants reported that they welcomed foreigners seven to ten times (4.8%), one participants reported that he or she welcomed foreigners more than 10 times (1.6%), however, the majority of participants, 43, have not reported the number of times they have welcomed foreigners (69.4%).

For the communication with foreigners, 20 participants reported one to three times (32.3%), followed by six participants at four to six times (9.7%), three participants seven to ten times (4.8%), and three participants more than ten times (4.8%). However, the majority of them, 30 participants, have not reported that they communicate with foreigners (48.4%).

With regard to traveling to perform work abroad, seven participants reported they had traveled one to three times (11.3%), three of them reported seven to ten times (4.8%), and 52 of them have not reported travelling to perform work abroad (83.9%).

For English skill development, nine participants reported they had studied at AUA (14.5%), followed by seven who studied at the Language Institute (11.3%),

three studied at ECC (4.8%), two studied at British Council (3.2%), and two studied at other language institutions (3.2%).

For self-development on English skills, the same number of 31 participants reported that they are reading English books and listening to conversations from the internet (50%), followed by 37 participants who watching movies (59.7%), 47 of them listened to music (75.8%), 14 of them speak with foreigners (22.6%), 11 of them read magazines (17.7%), and seven of them read newspapers (11.3%).

For self-rating English competency, the majority of them rated their skills as "fair" for all four skills. As to the English listening competency, 41 of them reported their competency as fair (66.1%), 13 of them reported their competency as not good (21%), five of them reported as good (8.1%), and three of them reported as excellent (4.8%). With regard to the English speaking competency, 32 of them reported their competency as fair (51.6%), 23 of them reported as not good (37.1%), five of them reported as good (8.1%), and two of them reported as excellent (3.2%). For the English reading competency, 33 of them reported as fair (53.2%), 17 of them reported as good (27.4%), nine of them reported as not good (14.5%), and three of them reported as excellent (4.8%). Lastly, the English writing competency, 36 of the participants reported as fair (58.1%), 12 of them reported as not good (19.4%), 10 of them reported as good (16.1%), three of them reported as poor (4.8%), and one of them reported excellence (1.6%).

4. 2 Needs and problems of English language use at the maintenance site of aircraft heavy maintenance mechanics

This section describes the overview of the English language use at the maintenance site of aircraft heavy maintenance mechanics. This part surveyed two aspects. One was about the needs of English language used at the workplace, and another was to reveal the problems of English language use at the maintenance premise. The five point Likert scales were used to explore the participants' needs and problems in accordance with below scales:

Scale value	Level of Needs	Level of problems
1.00-1.80	Least	Least
1.81-2.60	Slightly	Slightly
2.61-3.40	Moderately	Moderately
3.41-4.20	Mostly	Mostly
4.21-5.00	Extremely	Extremely

Table 2 presents the descriptive statistics of needs and problems of English language among the aircraft heavy maintenance mechanics. The results from the questionnaires elicited the needs and problems in four principal English skills; listening skills' function, speaking skills' function, reading skills' function, and writing skills' function.

Table 2 *Needs and Problems of English language*

	Needs			Problems		
	Mean	*SD*	Scale	Mean	*SD*	Scale
Four English skills						
Listening	4.06	.787	Mostly	3.67	.889	Mostly
Speaking	4.03	.829	Mostly	3.69	.886	Mostly
Reading	4.05	.895	Mostly	3.34	1.063	Moderately
Writing	3.98	.839	Mostly	3.54	.886	Mostly
Listening						
Listening to and understanding general conversations	4.00	.789	Mostly	3.57	.846	Mostly
Listening to and understanding questions about jobs	4.13	.896	Mostly	3.46	1.026	Mostly
Listening to and understanding descriptions of aircraft parts	3.94	.939	Mostly	3.38	1.035	Moderately
Listening to and understanding foreign superiors	3.98	.878	Mostly	3.70	.989	Mostly

(table continues)

Table 2 *Needs and Problems of English language (continued)*

	Needs			Problems		
	Mean	*SD*	**Scale**	**Mean**	*SD*	**Scale**
Listening to and understanding lectures from foreign instructors	4.02	.878	Mostly	3.72	.878	Mostly
Listening to and understanding foreign auditors	3.81	.989	Mostly	3.52	.965	Mostly
Listening to and understanding telephone conversations	3.89	.943	Mostly	3.58	.926	Mostly
Listening to and understanding foreign colleagues when performing aircraft maintenance abroad	3.97	.956	Mostly	3.71	.918	Mostly
Listening to and understanding different accents and dialects	3.92	1.021	Mostly	3.90	.858	Mostly
Listening to and understanding new vocabulary	3.90	.926	Mostly	3.77	.871	Mostly
Total	**3.96**	**1.002**	**Mostly**	**3.63**	**1.276**	**Mostly**
Speaking						
Greetings, Introductions	3.71	.965	Mostly	3.36	.895	Moderately
Making requests	3.79	.977	Mostly	3.52	1.01	Mostly
Explaining and providing suggestions on job information	3.98	.859	Mostly	3.74	.854	Mostly
Offering help	3.77	.931	Mostly	3.56	.886	Mostly
Questioning	3.79	.943	Mostly	3.67	.995	Mostly
Making phone conversation	3.74	.991	Mostly	3.66	.929	Mostly
Apologizing when errors occur	3.77	.931	Mostly	3.56	.992	Mostly
Explaining the reasons of failure	3.85	.963	Mostly	3.70	.926	Mostly

(table continues)

Table 2 *Needs and problems of English language (continued)*

	Needs			Problems		
	Mean	*SD*	**Scale**	**Mean**	*SD*	**Scale**
Clarifying questions or confirming messages	3.77	.902	Mostly	3.70	.869	Mostly
Pronouncing English consonants and vowel sounds correctly	3.89	.933	Mostly	3.75	.895	Mostly
Speaking with appropriate word stress	3.85	.910	Mostly	3.83	.905	Mostly
Speaking with appropriate word intonation	3.82	.885	Mostly	3.80	.953	Mostly
Speaking by using airline terminology correctly	3.89	.915	Mostly	3.62	.865	Mostly
Total	**3.82**	**1.026**	**Mostly**	**3.65**	**1.222**	**Mostly**
Reading						
Reading general publications	3.76	.970	Mostly	3.48	.788	Mostly
Reading for main ideas	3.87	.957	Mostly	3.55	.891	Mostly
Reading agreements and contracts	3.87	.949	Mostly	3.75	.888	Mostly
Reading information on task-cards	3.82	.984	Mostly	3.43	1.072	Mostly
Reading information on faxes	3.52	1.098	Mostly	3.38	1.003	Moderately
Reading information on e-mail	3.76	.935	Mostly	3.36	.949	Moderately
Reading aircraft manual CMM, AMM, SB, IPC, SRM, SIL	3.63	.996	Mostly	3.39	.936	Moderately
Reading Work Orders	3.89	1.01	Mostly	3.31	1.041	Moderately
Reading company update news	3.65	1.057	Mostly	3.31	.969	Moderately
Reading FAA and EASA Certificates of Airworthiness	3.87	1.016	Mostly	3.57	.939	Mostly

(table continues)

Table 2 *Needs and Problems of English language (continued)*

	Needs			Problems		
	Mean	*SD*	**Scale**	**Mean**	*SD*	**Scale**
Reading aviation organization websites in English	3.70	1.070	Mostly	3.48	.959	Mostly
Total	**3.76**	**1.042**	**Mostly**	**3.46**	**1.228**	**Mostly**
<u>**Writing**</u>						
Writing resumes	3.79	1.042	Mostly	3.62	.952	Mostly
Writing e-mail	3.76	.970	Mostly	3.66	.873	Mostly
Writing daily reports	3.65	1.042	Mostly	3.48	1.01	Mostly
Writing work orders	3.79	.908	Mostly	3.48	.924	Mostly
Writing task cards	3.76	.970	Mostly	3.41	.938	Mostly
Writing notes	3.63	.962	Mostly	3.43	1.008	Mostly
Writing maintenance documents	3.66	.974	Mostly	3.40	1.012	Moderately
Writing visa applications or customs' forms	3.65	1.073	Mostly	3.49	1.105	Mostly
Total	**3.71**	**.989**	**Mostly**	**3.49**	**1.216**	**Mostly**

4.2.1 Needs and problems for four English skills

This section presents needs and problems for the principal four English skills. With regard to needs of using English language in four principal skills, the questionnaire items with the highest means were Listening and Reading with the mean of 4.06 *(SD = .787)* and 4.05 *(SD = .895),* respectively. Speaking received third score with the mean of 4.03 *(SD = .829).* Writing had the lowest mean. The mean of writing is 3.98 *(SD = .839).*

As to the problems of using the four principal English skills, the questionnaire items with the highest means were Speaking and Listening with the mean of 3.69 *(SD = .889)* and 3.67 *(SD = .886),* respectively. Writing received the third score with the mean of 3.54 *(SD = .886).* Reading had the lowest mean. The mean of reading is 3.34 *(SD = 1.063).*

4.2.2 Needs and problems for English listening skills

This section shows the needs and problems for English listening skills. As to the needs of functioning English listening skills, the questionnaire item "Listening to and understanding questions about jobs" has the highest mean of 4.13 *(SD = .896),* followed by item "Listening to and understanding lectures from foreign instructors" with the mean of 4.02 *(SD = .878),* followed by item "Listening to and understanding general conversations" with the mean of 4.0 *(SD = .789).* The questionnaire item "Listening to and understanding foreign auditors" has the lowest mean, 3.81 *(SD = .989).*

As to the problems of using English listening skills, the questionnaire item "Listening to and understanding different accents and dialects" has the highest mean of 3.90 *(SD = .858),* followed by "Listening to and understanding new vocabulary" with the mean of 3.77 *(SD = .871),* followed by item "Listening to and understanding lectures from foreign instructors" with the mean of 3. 72 *(SD = . 878)* . The questionnaire item "Listening to and understanding descriptions of aircraft parts" has the lowest mean, 3.38 *(SD = 1.035).*

4.2.3 Needs and problems for English speaking skills

This section elicits the needs and problems for English speaking skills. With regard to needs for English speaking skills, the questionnaire item " Explaining and providing suggestions on job information" has the highest mean of 3.98 *(SD = .859),* followed by two questionnaire items, " Pronouncing English consonant and vowel sounds correctly" with the mean of 3.89 *(SD = .933),* and "Speaking by using airline terminology correctly" with the mean of 3.89 *(SD = . 915)* . The two questionnaire items, " Explaining the reasons of failure" has the mean of 3. 85 *(SD = . 963)* and " Speaking with appropriate word stress" has the mean of 3.85 *(SD = . 910)* . Item "Greetings, Introductions" from the questionnaire had the lowest mean of 3.71 *(SD = .965).*

As to the problems of functioning English listening skills, the questionnaire item "Speaking with appropriate word stress" had the highest mean of 3.83 *(SD = .905),* followed by item "Speaking with appropriate word intonation" with the mean of 3.80 *(SD = . 953),* and item " Explaining and providing suggestions on job information" with the mean of 3. 74 *(SD = . 854)* . Item " Greetings, Introductions" from the questionnaire had the lowest mean of 3.36 *(SD = .895).*

4.2.4 Needs and problems for English reading skills

This section presents the needs and problems for English reading skills. According to the results of needs for English reading skills, the questionnaire item " Reading Work Orders" received the highest mean of 3.89 *(SD = 1.01)*, followed by three questionnaire items, namely "reading for main ideas" had the mean of 3.87 *(SD = .957),* "reading agreements and contracts" had the mean of 3.87 *(SD = .949),* and "reading FAA and EASA Certificates of Airworthiness" had the same means of 3.87 *(SD = 1.016).* Item "reading information on faxes" from the questionnaire had the lowest mean of 3.52 *(SD = 1.098).*

The results have shown the problems of using English reading skills in that the questionnaire items with the highest means were items " reading agreements and contracts", "reading FAA and EASA Certificates of Airworthiness", and "reading for main idea" with the mean of 3.75 *(SD = .888),* 3.57 *(SD = .939),* and 3.55 *(SD = .891),* respectively. Two questionnaire items, "reading work orders" and "reading company update news", had the same mean of 3.31 with *(SD = 1.041)* and *(SD = .969),* respectively.

4.2.5 Needs and problems for English writing skills

This section shows the needs and problems for English writing skills. With regard to the need of using English writing skills, two questionnaire items, "writing resumes" and "writing work order" received the highest means of 3.79 *(SD = 1.042)* and *(SD = .908),* respectively, followed by two questionnaire items " writing e-mail" and "writing task cards" with the means of 3.76 *(SD = .970),* equally. The questionnaire item "writing notes" had the lowest mean of 3.63 *(SD = .962).*

As to problems of using English writing skills, the items " writing e-mail" and "writing resumes" from the questionnaire had the highest means, with the means of 3.66 *(SD = .873)* and 3.62 *(SD = .952),* followed by two items, "writing daily reports" and "writing work orders" with the same mean of 3.48 *(SD = 1.01)* and *(SD = .924),* respectively. The item "writing maintenance documents" from the questionnaire has the lowest mean of 3.40 *(SD = 1.012).*

4.3 Recommendations for English course

This section presents the results from part three of the questionnaire which

Table 3 *Participants' opinions for English course development (continued)*

Teaching-learning managements and materials	Mean	SD	Scale
You want to learn by lecturing only, no emphasis on any particular skills	3.15	1.304	No opinion
You want to participate in class activities	4.3	.704	Agree
Using only a text book is enough	3.13	1.274	No opinion
You want to learn English language throughout a range of media	4.18	.95	Agree
You want to be evaluated at the end of the course	4.02	.967	Agree

4.3.2 Course duration, time, and instructors

This section reveals the results obtained from the participants' point of view toward English course duration, time, and instructors.

Table 4 *Course duration, time, and instructors*

Course duration	N	%
Less than 30 hours	4	6.5
30 hours	26	41.9
More than 30 hours	30	48.4
Course schedule		
Once a week until the course is done	30	48.4
Every day for one week	9	14.5
Every day for two weeks	8	12.9
Every day for three weeks	14	22.6
Hour		
One hour	11	17.7
Two hours	29	46.8
Three hours	19	30.6
Other	2	3.2
Study with		

(table continues)

Table 4 *Course duration, time, and instructors (continued)*

Course duration	N	%
A native speaking instructor	28	45.2
A Thai instructor	5	8.1
A native and Thai instructor sharing the teaching topics	5	8.1
A native instructor who has a Thai instructor as an assistant teacher	23	37.1

Table 4 shows the frequencies and percentage which the participants rated their opinions toward English course duration, time, and instructors. Out of 62 participants, 30 of them reported that they want the course duration to be more than 30 hours. With the same number of participants, they reported to prefer the course schedule to be once a week until the course is done, which contributed to 48.4% of the total number of participants. Forty-six point eight percent of the participants reported to prefer the time of the course at two hours, the number is 29 out of 62 participants. And the majority of them reported to prefer to study with a native speaking instructor, which contributed to 45.2% or the total number of participants of 28 out of 62. What is more, more than one-third of participants reported to prefer a native instructor who has a Thai instructor as an assistant teacher.

4.3.3 Suggestions about English course development

This section presents the respondents' points of view with regard to suggestions about English course development. Three participants reported to need the course as soon and as complete as possible because English was significant for them. Two of them reported that they would like to have the English course to be taught seriously and practically. Four out of the 62 participants reported that they wanted the course to be taught regularly. Three of them reported that they would like to have the English course focusing on speaking rather than grammar. One out of the 62 participants reported to prefer class with less than 10 persons, the course should start from the English foundation, the teaching media should suit their work, and they would like to study together as an organization.

CHAPTER 5

CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS

5.1 Summary of the study

English is considered as the global language which people speak internationally. It is widely accepted as the important medium in the international context as people from all over the world use English to suit their objectives, namely, communication, business, and to keep up with advancements. As well as other businesses, English plays an important role in the airline business as the staffs from operation, maintenance, and support employ English in their workplaces. The aircraft maintenance personnel utilize manuals and documentation in which clear understanding is significant. Even if English is the global language in the aviation industry, the people who utilize it are not mother-tongue communicators. It is reported that the proficiency levels of English are varied significantly all around the world and the proficiency constraint could cause serious impact to the aviation industry. Thus, this study surveys the English needs of the aircraft maintenance mechanics who belong to a significant part of aviation maintenance and explores the problem areas with regard to their work functions. At the same time, the study reveals the suggestions for English course development which would be beneficial for designing and arranging the English course so as to suit learners' needs and maximize the proficiency of English and maintenance activities.

5.1.1 Objective of the study

This study aims at disclosing the English language needs of aircraft heavy maintenance mechanics in an airline that has maintenance activities at Donmuang Airport. This study is developed to reveal the answers to the questions below:

1. What are the needs of English language use in aircraft heavy maintenance mechanics?

2. What are the problems in using English language for aircraft heavy maintenance mechanics?

3. What are the needed areas of development of English courses for aircraft heavy maintenance mechanics?

5.1.2   Participants, materials, and procedures of the study

Participants: The participants of this study were 62 aircraft heavy maintenance mechanics who work for an airline that has their maintenance facility at Donmuang Airport during year 2018 AD.

Materials: The research instrument was a questionnaire which consisted of three main parts. Part one revealed the participants' background information. Part two disclosed the English needs and problems for four fundamental English skills, namely, listening, speaking, reading, and writing. Part three asked the participants' recommendations for English development courses. Multiple choices and a five points Likert scale were used for the questionnaire's part one. For the questionnaire's parts two and three, the five point Likert scales and open ended questions were employed to identify the participants' opinions.

Procedure: The questionnaires were piloted to four aircraft heavy maintenance mechanics for verifying the conciseness and clarity. After finishing piloting, the questionnaires, which consisted of 73 sets in Thai language, were sent to the superior of the heavy maintenance department. After that, the set of questionnaires was passed to the aircraft heavy maintenance mechanics. The questionnaire total of 62 sets were returned in three days, which accounted for 84.9%. Descriptive statistics, namely percentage, frequency, mean, and standard deviation were calculated through the SPSS.

5.2 Summary of the findings

This section provides the results of the study namely, background information, needs and problems of using English language and recommendations for English course development.

5.2.1   Background information of the participants

According to the results, the large majority of the participants were male (87.1%). More than half of them were aged between 20-29 years (54.8%). A large proportion of them held a bachelor's degree (67.7%) and had working duration between 1-5 years (66.1%). Most of the participants agreed that English is important for their work

(98.4%) and the English course provided by the company is not sufficient (90.3%). Some proportion of the participants reported to attend an English course (21%), welcome foreigners during job performance (30.6%), communicate with foreigners during job performance (51.6%), and travelling to perform work abroad (16.1%). A large majority of the participants reported to develop English language by themselves, some of them reported to attend the language institution (37%). More than half of them rated the four fundamental skills of English as "fair" as can be seen in Table. 1.

5.2.2 Participants' opinions on needs and problems of English language in all four skills

Looking at the participants' needs for using English language in all four skills, it was shown that the need for listening was needed at the highest level, followed by the needs for reading. The third and fourth rank went to the needs for speaking skills and writing skills, respectively.

As to the problems of using English language in all four skills, the problems of speaking skills and listening skills were regarded as the most problematic, followed by writing skills and reading skills, respectively.

5.2.3 Participants' points of view on needs and problems of using English language in four fundamental skills with regard to functions

Looking at the "listening" skills, the highest level of needs was revealed for "listening to and understanding questions about jobs", followed by "listening to and understanding lectures from foreign instructors", and "listening to and understanding general conversations", respectively. Every function with regard to the needs for using listening skills was regarded as "mostly" need. The questionnaire item "listening to and understanding foreign auditors" received the lowest mean as to listening skills needed. Consequently, all listening activities were regarded as "mostly" problematic. "Listening to and understanding different accents and dialects" was regarded as the most problematic, followed by "listening to and understanding new vocabulary", and "listening to and understanding lectures from foreign instructors". In contrast, the questionnaire item "listening to and understanding descriptions of aircraft parts" was regarded as least problematic.

As to the results of needs and problems of using "speaking" skills, every function with regard to speaking skills was regarded as "mostly" needed. The

"explaining and providing suggestions on jobs" received the highest score, followed by "pronouncing English consonant and vowel sounds correctly" and "speaking by using airlines terminology correctly", followed by "speaking with appropriate word stress" and "explaining the reasons of failure". On the other hand, the questionnaire item "greeting and introduction" received the lowest mean for the needs of using speaking skills. With regard to the "problems" of using speaking skills, 12 out of 13 items were scored as "mostly" problematic. The questionnaire item "speaking with the appropriate word stress" received the highest score on most problematic, followed by "speaking with appropriate word intonation", "explaining and providing suggestions on job information", "explaining the reasons of failure", and "clarifying questions or confirming messages", respectively. Conversely, item "greeting and introduction" from the questionnaire was regarded as least problematic.

According to the needs and problems of using "reading" skills, all 10 items were rated as "mostly" needed. "reading work orders" received the highest score for the most needed item, followed by "reading for main idea", "reading agreements and contracts", "reading FAA and EASA certificate of airworthiness", and "reading information on task-cards". On the contrary, the questionnaire item "reading information on faxes" was regarded as least needed. Looking at the scores on problems of reading, six out of 11 items from the questionnaire were rated as "mostly" problematic. "Reading agreements and contracts" received the top score as the most problematic, followed by "reading FAA and EASA certificate of airworthiness", and "reading for main idea", respectively. On the other hand, two questionnaire items, "reading work orders" and "reading company update news" were regarded as least problematic.

With regard to needs and problems of using "writing" skills, all eight items from the questionnaire were rated as "mostly" needed. The highest score consisted of two items, namely "writing resumes" and "writing work order", were regarded as "mostly" needed, followed by "writing e-mail", "writing task cards", and "writing maintenance documents". In contrast, the questionnaire item "writing notes" was regarded as least needed. Looking at the "problems" of using writing skills, seven items out of eight items were rated as "mostly" problematic. The questionnaire items "writing e-mail" was the item with highest score on mostly problematic,

followed by "writing resumes", "writing daily reports", and "writing work orders", respectively. Nonetheless, the questionnaire item "writing maintenance documents" was regarded as least problematic.

5.2.4 Participants' points of view on suggestions for English course development

Aircrafts heavy maintenance mechanics agreed that the four English fundamental skills should be taught equally. Moreover, they revealed the agreement to prefer class participation. Almost half of them expressed that they would like to have courses for more than 30 hours, what is more, the same number of participants reported to prefer the course schedule to be once a week until the course is done. Twenty-nine out of 62 participants reported to prefer the time of the course to be two hours. A large majority wanted to study with a native speaking instructor, and one-third of them reported to prefer a native instructor who has a Thai instructor as an assistant teacher.

5.3 Discussion of the findings

This section will focus on overall aspects which were revealed from this study.

5.3.1 Aircraft heavy maintenance work related to English skills development

Despite the large majority of the aircraft heavy maintenance mechanics who regarded that English was important to their jobs, only a minority of them reported attending the English course provided by the company, welcoming foreigners during job performance, communicating with foreigners, or traveling to perform work abroad. The reason may be the English skills competency which differed among the aircraft heavy maintenance mechanics. The aircraft heavy maintenance mechanics who possess higher English skills may achieve greater opportunities as the company would assign the tasks which require English skills to more competent mechanics. Another reason could be time constraints for performing routine functions. They attend work in shifts during day and night to support the round the clock activities and to meet the specific timeframe of aircraft maintenance, which may hinder them from having a chance to attend the English course, welcome foreigners during job performance, communicate with foreigners, or travel to perform

work abroad.

As a result of these constraints, a minority of them reported to attend the English language institutions namely, AUA, British Council, ECC, or other language institutes. The large majority of the mechanics reported to study English by themselves by various means which may be the result of their time schedules. Almost all of the mechanics rated their proficiency English level as fair, which reflects the participants' perception about their English competency and this could be interpreted that there are the areas of English improvement for them.

5.3.2 The score of needs

Looking at the overall score of needs, the skills which the participants rated at the highest score was listening skills, followed by speaking skills and reading skills, and the least score on needs was writing skills. As to the listening functions, "listening to and understanding questions about jobs" was scored at highest, followed by "listening to and understanding lectures from foreign instructors", "listening to and understanding general conversations", and "listening to and understanding foreign superiors". These functions were regarded as "mostly" needed by the aircraft heavy maintenance mechanics. These functions occurred in daily maintenance activities and were considered significant as the subjects needed clear understanding for their work functions which occurred in daily activities and tasks that they have to perform every day. The thorough understanding from listening is crucial as the mechanics may perform improperly if they don't understand the job instructions accurately, and the understanding leads to the quality of performance. Another reason may be the need to establish effective communication, which would be from the thorough understanding at the initial process that is listening. These reflected the need for work-related job functions which the participants regarded as significant in high level. In contrast, the listening skills which received the lowest score was "listening to and understanding foreign auditors". The reason could come from the schedule of auditing which may take place occasionally in one year, therefore, the aircraft heavy maintenance mechanics regarded this function at the lowest score of needs. The outcomes of this study are in line with the study of Eamjoy (2015) who conducted "A study of needs and barriers in English communication skills of Thai secretaries at the women secretaries and administrative professional association of Thailand (WSAT)" as the

need to use listening skills for secretaries was regarded as the highest need due to the subjects need to listen to and understand assignments from the executives. The reasons were that secretaries needed to listen before answering questions or replying. Thus, listening is regarded as important for avoiding miscommunication and enhancing the work effectiveness. Moreover, the findings from Tatti (2007) in "A study of the needs of Thai dance instructors in using the English language as a basis for course design" also supported this study. The finding showed the participants rated that listening skills were the highest needed by the subjects because the need for understanding while traveling abroad for job performance for Thai dance instructors was significant.

Another possible reason why listening skills received the higher score than speaking skills may be in relation to the activities which are more prone to listening than speaking. The need for listening is higher due to "listening is the basis of communication", Sukpradit (as cited in Tatti, 2007, p. 38). This explanation is supported by the finding of Tangniam (2006) in "An analysis of English language needs for Thai Airways ground staff" that listening was mostly needed by the ground staff because their daily tasks are concerned with dealing with passengers face to face prior to flight departure and after flight arrival. The understanding of passengers' demands and complaints were crucial. Moreover, the findings of Siwayingsuwan (2015) in "Needs and problems in English listening and speaking of tourist police officers at Suvarnabhumi Airport" showed that listening was employed mostly in the participants' work as they are responsible for the safety and security of tourists. They need to understand thoroughly when receiving tourists' demand so as to provide assistance accurately.

The second highest score of needs was the "speaking" skills. All of the items were regarded as mostly needed. The function "explaining and providing suggestions on job information" received the highest score, followed by "pronouncing English consonant and vowel sounds correctly", "speaking by using airline terminology correctly", "explaining the reasons of failure", and "speaking with appropriate word stress", respectively. It is rather clear that mechanics regarded their work functions and the correctness of English pronunciation as important because they are key elements for clear interpersonal communication. In contrast, the lowest

score of needs of speaking skills was the item "greetings and introductions". This reflected the participants' perception of the importance of the non-work functions as least important.

The third score of needs was the " reading" skills. All of the questionnaire items were rated as " mostly" needed. The function " reading work orders" received the highest score on needs, followed by " reading for main idea", " reading agreements and contracts" , and " reading information on task-cards" , respectively. These results present the needs of mechanics toward the work-related functions which they perceived as significant. The greater understanding on the texts used in the media of aircraft maintenance was considered the topmost need. On the other hand, the questionnaire item "reading information on faxes" received the lowest score on needs of reading functions. This may be from participants' greater contact with other kinds of media than the fax machine which has been mainly replaced by other media such as e-mail and telephones.

The overall lowest score of need was "writing" skills. Even though all of the items from the questionnaire were scored as "mostly" needed, the overall mean score received the lowest rank. The questionnaire item "writing resumes" and "writing work orders" received the highest score as to functions, followed by "writing e-mail", "writing task-cards", and "writing maintenance documents". These functions are related to daily tasks which participants needed to improve the most. Nonetheless, the item "writing notes" from the questionnaire received the lowest mean score, which refers to less usage in daily job performance.

According to the results of needs of using English reading and writing skills, even though all of the items from the questionnaire were rated as mostly needed, these two skills received the lowest mean for needs, which is less than listening skills and reading skills. The reason may come from the needs of participants to focus significantly on the interpersonal communication functions which they perceived as the most essential, namely, listening and speaking which could assist the participants so as to initiate the communication between foreigners. What is more, the level of exposure to English language maybe be less in terms of reading skills and writing skills in everyday activities and the participants may be familiar with the common texts utilized in the aircraft maintenance context, as the media in aviation

maintenance activities concern common terminology which could be seen and interpreted every day, therefore, the reading skills and writing skills received lower scores than listening and speaking. In the view of participants, work effectiveness and clear communication could be established firstly from thorough listening skills and speaking skills because both skills are the prime factors for clear face to face communication.

According to the results, it is obvious that listening skills were the areas of improvement that the subjects needed most, which corresponds to the first research question which aimed at disclosing the needs of English language for aircraft maintenance mechanics. The results showed English language deficiency from the subjects' perception, which will bring awareness to the firm so that the adequate English improvement program can be designed.

5.3.3   The score of problems

As to the overall score of the "problems" of using English language for aircraft maintenance mechanics, the highest score of problems was "speaking" skills, followed by "listening" skills and "writing" skills. The lowest score of problems was "reading" skills.

According to the results of the highest score of problems, the skills in which aircraft heavy maintenance mechanics regarded the most problematic was "speaking" skills. For the speaking functions, "speaking with appropriate word stress" was regarded as the highest score of problems, followed by the second most problematic item with regard to functions which was "speaking with appropriate word intonation", followed by "explaining and providing suggestions on job information", respectively. This reflected the participants' perception toward correct pronunciation for clarity of speech and job inquiry. This in line with Siwayingsuwan's (2015) study in "Needs and problems in English listening and speaking of tourist police officers at Suvarnabhumi Airport" as the participants faced the same problems with regard to word stress. On the other hand, the item which received the lowest score on the problematic scale was "greetings and introductions" which may be due to the fact that the participants use this function less than others in daily job activities. These findings are in line with Thatphaiboon (2014) in "An exploration of the language needs of Thai teaching assistants in international schools in Bangkok" that speaking was the most

needed by teaching assistants for improvement because they need to speak in more understandable conversations and as fluently as possible when they work providing information and instructions to students. Moreover, Prachanant (2012) found in "Needs Analysis on English language use in Tourism industry" that speaking skills were rated as the most significant skill so as to function in everyday work because the tour guides need to direct, accompany, and correspond with overseas travelers from all over the world.

As to the second highest score on problems, the "listening" functions were revealed as the most problematic. The questionnaire item "listening to and understanding different accents and dialects" received the highest score of problems, followed by "listening to and understanding new vocabulary", "listening to and understanding lectures from foreign instructors", "listening to and understanding foreign colleagues when performing aircraft maintenance abroad", and "listening to and understanding foreign superiors", respectively. It is true that people in Thailand may not get acquainted with the different accents of foreigners and new vocabulary because of the low level of exposure to the foreign context and media, which was in line with study of needs analysis of Chenaksara (as cited in Eamjoy, 2015, p. 63) that listening skills were the main problems of Thai Airways International cabin crew due to the accents of foreigners that caused misunderstandings. This is common for Thai people as they are not familiar with some kinds of accents. When facing different accents from different nationalities, e.g. India, England, Singapore, or Australia, understanding become more difficult, Chamnankit (2015).

According to the results of the third rank on problems, the "writing" skills received the third score as mostly problematic. The questionnaire item "writing e-mail" was regarded as mostly troublesome, followed by "writing resumes", "writing visa application or customs forms" , " writing work orders" , and " writing daily reports" , respectively. The item with lowest score of the problematic area was "writing maintenance documents". These functions were crucial to the performance of aircraft maintenance mechanics' work as they tend to use these functions regularly in daily work operations. The effectiveness of writing is important because participants need to generate the messages properly, which corresponds to their work e. g. the participants use e-mail writing every day, and they expressed their thoughts that

writing e-mail function was problematic.

As to the lowest score of problems, "reading" received the lowest mean on problematic. The questionnaire item "reading agreements and contracts" was regarded as mostly problematic, followed by "reading FAA and EASA certificates of Airworthiness", "reading for main idea", "reading general publications", and "reading aviation organization websites in English", respectively. The participants perceived reading with regard to work functions as troublesome as they face these functions in their workplace on a daily basis. The two questionnaire items receiving the least score on problematic were "reading work orders" and "reading company update news" which reflected the familiarity of the participants toward the terminology and texts used in working media.

Looking at the problems of using English "reading and writing" skills, five items out of 11 items from the questionnaire in reading functions problems were rated as "moderately" problematic. This may be from the low level of exposure to reading due to the aircraft maintenance mechanics' work and their familiarity with the texts used in the working environment. The familiarity with the common structure of aircraft maintenance texts and structures of the aircraft parts has an impact toward the perception of mechanics as to less problematic areas than speaking skills and listening skills. Thus, the reading skills were rated at lower scores. As to the writing skills, the sum of the mean scores received the second lowest problematic rating; the results may come from the participants' utilization of writing skills at their workplace at the lower level of problems.

Pertaining to the findings, participants revealed their opinions towards the most problematic English skill, speaking, which answers the second research question as to the problems of English language for aircraft maintenance mechanics. The results revealed the English language barriers of the subjects in term of pronunciation and job inquiry, which hinder them from mastering the effective communication that are considered by the company as important elements which impact job performance.

5.3.4 Preferences for Course Design

The survey was designed to explore the participants' preferences for course arrangements, which aimed at answering the third research question regarding

the improvement areas as to designing an English course. According to the results, aircraft heavy maintenance mechanics expressed their subjective opinions to have all four fundamental skills to be taught equally, which may be from the rating of all four language skills. According to Table 1, they rated their proficiency level as "fair" in all four fundamental skills. Thus, they need to learn all four skills equally. What is more, the mechanics would like to take part in class activities. This outcome could be integrated into the course design so as to enable more involvement of students in class. The mechanics also revealed that they would like to have the course's length at more than 30 hours with the course duration of two hours, and the frequency of the course was once a week until finished. The subjects preferred to have class with a native instructor rather than a Thai instructor. These perceptions could be regarded as the important elements in designing the insightful course to satisfy learners' requirements. The topmost emphasis should be put on listening and speaking skills. In addition, the mechanics should be taught to be familiar with various accents from each continent. At the same time, course time and materials should be tailored to the mechanics' needs.

5.3.5 The application of theory of needs

The well-known models of needs analysis cited in Chapter 2, namely, Target Situation Analysis (TSA), Present Situation Analysis (PSA), Hutchinson and Water's learning-centered approach needs analysis, and Dudley-Evans and St John's model of needs analysis, are believed to be the efficient way of English language course determination.

Target Situation Analysis (TSA) is the model in which language learners will be utilizing what they studied and the primary focus will be at the post-course stage, Hutchinson and Waters (1987) and Robinson (as cited in Li, 2014, p. 1869). The determination is essential prior to arranging the syllabus, that is, prior knowledge of the needs of participants, namely, listening skills and speaking skills, and the problems of participants, namely, speaking and listening skills could assist in arranging course and teaching-learning materials to suit learners' needs. Ultimately, the post course stage would fulfill learners' demands, especially the listening and speaking skills.

Present Situation Analysis (PSA) is the method in which the difference

between the learners' present situation and target situation are determined, as well as the efficiency, advantage, and drawbacks of learners are revealed at the initial stage of the course, Robinson (as cited in Li, 2014, p. 1870). As Bloor suggested, the needs analysis may be target-oriented or learner-oriented. The former involved specifying the learner's future responsibility in a target situation and addressing the language-related knowledge that is necessary. The latter, in contrast, is concerned with specifying what learners can achieve at the initial stage of the course and identifying problems which may have arisen (as cited in Li, 2014, p. 1870). The results of this study show the level of needs and problems, which could be considered as language barriers, at the stage prior to course design. The participants expressed that their topmost needs were listening, especially in the area of listening to and understanding questions about jobs, listening to and understanding lectures from foreign instructors, and listening to and understanding general conversations. At the same time, they disclosed their topmost problems, which were speaking skills, especially in speaking with appropriate word stress and speaking with appropriate word intonation. Knowing learners' disadvantages right from the start will help set the syllabus with the maximum level of language proficiency for aircraft maintenance mechanics to master at the end of the course.

Hutchinson and Waters (1987) indicated that the learning-centered approach needs analysis model concerns the target situation needs and the learning needs. The former is comprised of necessities, lacks, and wants. The latter consisted of learners' motivation toward learning language, the preferences, the availability of resources, the venue in which it should take place, and learner background information. Knowing the needs of participants could address the necessities, so as to further determine the lacks which are the difference between knowledge possessed by learners and what they need to know. The participants also show their wants which are their subjective needs, for example, how they want the course be arranged with a length of more than 30 hours, course schedule once a week, each class duration of two hours, and to be taught by native instructors. These revealed the learning needs preference of the participants which could be embraced in the target situations needs and the learning needs.

Dudley-Evans and St John's Model of Needs Analysis (as cited in Li,

2014, p. 1871) comprised the essential aspects for determination. "Professional information about learners" concerned jobs and functions which were utilized by learners. In this regard, the job characteristics of aircraft maintenance mechanics as to English language needs were revealed as the baseline for course determination. "Personal information about learners" concerned the essential elements that impact how learners learn language. From the personal information, it is obvious that the work duration, experience, and working timetable of the mechanics were the factors which caused an impact on their capabilities to learn language. "Language information about the target situation" dealt with learners' current ability and utilization of language and could be perceived as similar to Present Situation Analysis (PSA), which is known to be a suitable method for specifying the lacks. The mechanics expressed their opinions toward the areas which needed improvement, for example, they have limited time for attending the English course even though English is important. "Language learning needs" aimed at specifying the effective method for language learning and addressing lacks. Effective teaching could be based on knowing the aircraft mechanics preferences, such as the results from the subjects' subjective opinions on how they would like to learn English. "How to communicate in the target situation" concerned the way in which language was employed in target situations. In this regard, it is the consideration of how English language is communicated in the aircraft maintenance context. Effective teaching could be improved by integrating the theory of needs into the aircraft maintenance workers' circumstances.

5.3.6 Limitations

As to the limitations of this study, improvement of the research instruments should be considered so as to capture the exact needs and problems of the participants. The existing questionnaire might reveal only common feedback which may not reflect the in-depth needs and problems. It would be more insightful if interviews could be added so as to provide more insight into the needs and problems from the aircraft heavy maintenance mechanics.

5.4 Conclusions

The participants of the study were aircraft heavy maintenance mechanics who

work for an airline. Their English proficiency level had impact on their job effectiveness because the texts used in aircraft maintenance context, communication, and information are in English. The majority of them are young adults who have been working with the company less than five years and they perceived their English as important and needing more improvement in all four English fundamental skills. The greatest areas of needs are listening skills, namely, listening to and understanding questions about jobs, listening to and understanding general conversations, and listening to and understanding lectures from foreign instructors. At the same time, speaking skills are the areas which were regarded as most problematic, especially speaking with appropriate word stress, speaking with appropriate word intonation, and explaining and providing suggestions on job information. As a result, the company should set up an English training program based on learners' objectives by focusing on the areas of needs, problems, and learners' preferences.

Due to the time constraints of the aircraft heavy maintenance mechanics, it is advisable to design the course that focuses on participation in class activities and aims at teaching all four skills equally, at their working premises and with regard to their working schedule. Due to participants' preferences to learn more than 30 hours, 2 hours per time and once a week, the course should be arranged to be more flexible so as to fit with their work schedule every single week.

It is anticipated that there will be more opportunities for aircraft heavy maintenance mechanics after they have improved their English skills as they can perform work accurately, safely, and professionally which minimize the risks and incidents for the aircraft maintenance activities.

5.5 Recommendations for further study

According to the findings, the following recommendations are shown for further study.

1. Further research should be conducted to explore the English needs and problems of other areas of aviation such as line maintenance or office staff. The results from the aircraft heavy maintenance mechanics could enhance the findings.

2. Additional research should be conducted to explore the needs and problems of using English language for another airline, in which the findings are compared to

each other.

       3. Qualitative data should be added, for example, interviews, so as to explore the in-depth, precise, and detailed needs and problems of the participants.

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APPENDICES

APPENDIX A

Questionnaire in English

A study of Needs Analysis of English Language for Aircraft Heavy Maintenance Mechanics

Part I: Background information

Instructions: Please check √ all that apply to you and fill in the blanks provided

1. Age: ( ) 20-29   ( ) 30-39
           ( ) 40-49   ( ) 50-59

2. Gender: ( ) Female ( ) Male

3. Education   ( ) Below Bachelor's Degree
                 ( ) Bachelor's Degree
                 ( ) Master's Degree
                 ( ) Doctorate

4. How long have you been working as heavy maintenance mechanic?
                 ( )   1-5 years
                 ( )   6-10 years
                 ( ) 11-15 years
                 ( ) 16-20 years
                 ( ) 21-25 years
                 ( ) 26-30 years
                 ( ) 31-35 years
                 ( ) 36 years or more

5. Do you think English is important for your present job? ( )   Yes   ( ) No

6. Does the company provide adequate English courses for you?
       ( ) Yes   ( ) No

7. The latest English course provided by the company in which you participated was………………months ago/………………years ago

8. During the job, do you have the opportunity to welcome the foreigners?
       ( ) Yes

       If yes, how many time?

( ) 1-3 times   ( ) 4-6 times   ( ) 7-10 times   ( ) more than 10 times

(Please specify)……………

( ) No

9. During the job, do you have the opportunity to communicate with the foreigners?

    ( )   Yes

    If yes, how many times?

    ( ) 1-3 times   ( ) 4-6 times   ( ) 7-10 times   ( ) More than 10 times

    (Please specify)………………

    ( ) No

10. During the job, do you have the opportunity to travel aboard for job operations?

    ( )   Yes

    If yes, how many times?

    ( ) 1-3 times   ( ) 4-6 times   ( ) 7-10 times   ( ) More than 10 times

    (Please specify)………………

    ( )   No

11. How do you develop your English skills?

    ( ) By studying at   ( ) By self-study

    (choose more than one answer)   (choose more than one answer)

    ( ) AUA   ( ) Read English books

    ( ) British Council   ( ) Listenining to conversations from internet

    ( ) ECC   ( ) Talk with foreigners

    ( ) Language Institute   ( ) Read magazines

    ( ) Other language schools   ( ) Read newspaper

                              ( ) Listen to music

                              ( ) Watch movies

                              ( ) Other (please specify)…………

12. Please rate your English proficiency in the following skills

Skills	Excellent (5)	Good (4)	Fair (3)	Poor (2)	Very Poor (1)
Listening					
Speaking					
Reading					
Writing					

Part 2 Opinions on Needs and Problems of Using English of Aircraft Heavy Maintenance Mechanics

Instructions: Please check √ in the boxes on the left to rate your needs in using English language in each provided situations and check √ in the boxes on the right to rate your problems in using English languages in such situations.

To what extent do you need the English skills, and to what extent do these skills cause you problems?

Needs					Skills	Problems				
Extremely (5)	Mostly (4)	Moderately (3)	Slightly (2)	Least (1)		Extremely (5)	Mostly (4)	Moderately (3)	Slightly (2)	Least (1)
					Listening					
					Speaking					
					Reading					
					Writing					

1. To what extent do you need to use English skills in the following activities and to what extent are using English in these activities/situations difficult for you?
   1. **Listening**

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					Listening to and understanding general conversations					
					Listening to and understanding questions about jobs					
					Listening to and understanding descriptions of aircraft parts					
					Listening to and understanding foreign superiors					
					Listening to and understandi					

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					ng lectures from foreign instructors					
					Listening to and understandi ng foreign auditors					
					Listening to and understandi ng telephone conversatio ns					
					Listening to and understandi ng foreign colleagues when performing aircraft maintenanc e aboard					
					Listening					

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					to and understandi ng different accents and dialects					
					Listening to and understandi ng new vocabulary					

2. **Speaking**

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera te (3)	Slight ly (2)	Least (1)
					Greeting, Introductio n					
					Making requests					
					Explaining and providing suggestion on job information					
					Offering					

Needs					Activities	Problems				
Extremely (5)	Mostly (4)	Moderately (3)	Slightly (2)	Least (1)		Extremely (5)	Mostly (4)	Moderate (3)	Slightly (2)	Least (1)
					help					
					Questioning					
					Making phone conversation					
					Apologize when error occurs					
					Explaining the reasons of failure					
					Clarifying questions or confirming message					
					Pronouncing English consonant and vowel sounds correctly					
					Speaking with appropriate					

Needs						Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)	Activities	Extrem ely (5)	Mostly (4)	Modera te (3)	Slight ly (2)	Least (1)
					word stress					
					Speaking with appropriate word intonation					
					Speaking by using airlines terminolog y correctly					

3. **Reading**

Needs						Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)	Activities	Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					Reading general publication s					
					Reading for main idea					
					Reading agreement and contracts					
					Reading					

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					of Airworthin ess					
					Reading aviation organizatio n website in English					

4. **Writing**

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					Writing resumes					
					Writing e-mail					
					Writing daily report					
					Writing Work Order					
					Writing Task Card					
					Writing note					

Needs					Activities	Problems				
Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)		Extrem ely (5)	Mostly (4)	Modera tely (3)	Slight ly (2)	Least (1)
					Writing maintenanc e documents					
					Writing Visa application or customs forms					

Part 3: Opinions and suggestions for the courses of teaching-learning activities provided to the Aircraft Heavy Maintenance Mechanics

1. About teaching-learning managements and materials

Instructions: Please check √ in the boxes provided by using the criteria below:

5 – Strongly agree

4 – Agree

3 – No opinion

2 - Disagree

1 – Strongly disagree

Teaching-learning managements and materials	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Four skills should be taught equally					
The course should emphasize on listening skill					
The course should emphasize on speaking skill					

Teaching-learning managements and materials	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
The course should emphasize on reading skill					
The course should emphasize on writing skill					
You want to learn by lecturing only, no emphasizing on any particular skills					
You want to participate in class activities					
Using only a text book is enough					
You want to learn English Language throughout a range of media					
You want to be evaluated at the end of the course					

Instructions: Please check √ in parentheses in each item that best represents your own opinion.

    1. You want the course duration to be

        ( ) less than 30 hours (please specify)................................

        ( ) 30 hours

        ( ) more than 30 hours (please specify)................................

    2. You want the course schedule to be

        ( ) once a week until the course is done

        ( ) every day for one week

        ( ) every day for two weeks

        ( ) every day for three weeks

3. Please specify hours you want to study each time

   ( ) 1 hour   ( ) 2 hours   ( ) 3 hours   ( ) Other (please

   specify…………)

4. You want to study with

   ( ) a native speaking instructor

   ( ) a Thai instructor

   ( ) a native and Thai instructor sharing the teaching topics

   ( ) a native instructor who has Thai instructor as an assistance teacher

5. Do you have suggestions about structuring or designing of the English course

   for aircraft heavy maintenance mechanics?

   ....

   ....

   ....

   ....

   ....

   Thank you for your time filling up the questionnaire completely ☺
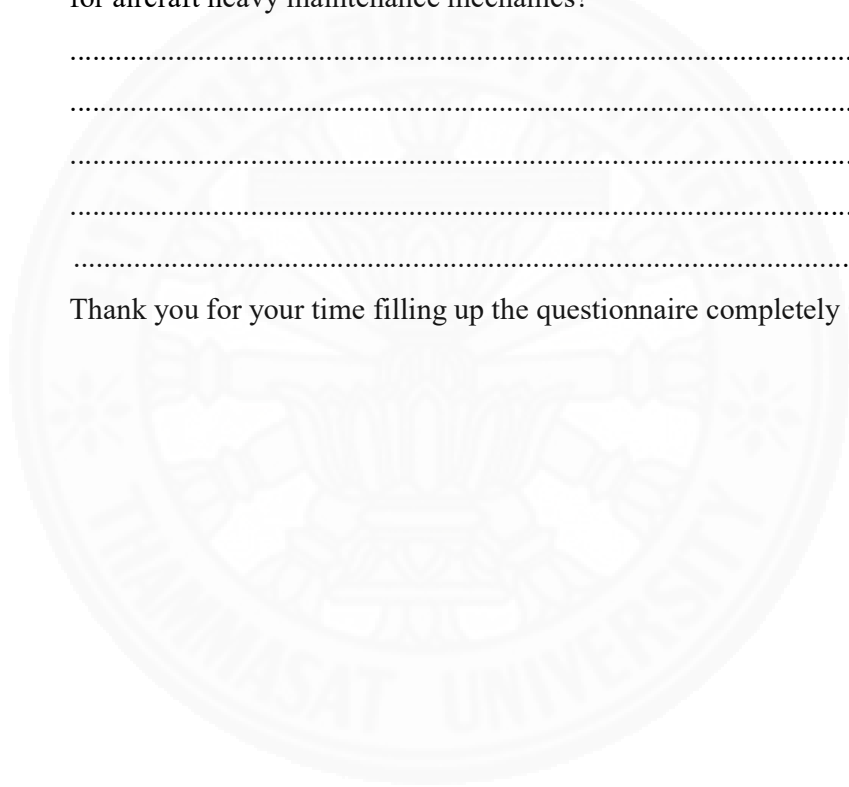
APPENDIX B

Questionnaire in Thai

แบบสอบถาม

เรื่อง

บทวิเคราะห์ความต้องการในการใช้ภาษาอังกฤษของช่างซ่อมบำรุงรักษาอากาศยานขั้นหนักของสายการบินแห่งหนึ่งที่มีฐานซ่อม

บำรุงที่ท่าอากาศยานดอนเมือง กรุงเทพมหานคร

<u>คำชี้แจง</u> แบบสอบถามฉบับนี้มีวัตถุประสงค์เพื่อทราบข้อมูลเกี่ยวกับความต้องการ และปัญหา ในการใช้ภาษาอังกฤษของช่างซ่อม

บำรุงรักษาอากาศยานขั้นหนักของสายการบินแห่งหนึ่งที่มีฐานซ่อมบำรุงที่ท่าอากาศยานดอนเมือง กรุงเทพมหานคร ซึ่งข้อมูลที่ได้

จากท่านจะเก็บไว้เป็นความลับ โดยจะนำเสนอผลที่ได้ไปใช้ในการศึกษา เพื่อหาแนวทางในการจัดทำ ปรับปรุง และพัฒนาหลักสูตร

ภาษาอังกฤษของช่างซ่อมบำรุงรักษาอากาศยานขั้นหนัก เพื่อให้สอดคล้องกับความต้องการของพนักงาน

แบบสอบถามฉบับนี้แบ่งออกเป็น 3 ส่วน ได้แก่

<u>ส่วนที่ 1</u> ข้อมูลทั่วไปของพนักงาน

<u>ส่วนที่ 2</u> ความคิดเห็นเกี่ยวกับความต้องการและปัญหาการใช้ภาษาอังกฤษของช่างซ่อมบำรุงรักษาอากาศยานขั้นหนัก

<u>ส่วนที่ 3</u> ข้อคิดเห็นและข้อเสนอแนะในการจัดการเรียนการสอนภาษาอังกฤษสำหรับช่างซ่อมบำรุงรักษาอากาศยานขั้นหนัก

    ผู้วิจัยใคร่ขอความร่วมมือจากท่านในการตอบแบบสอบถามทุกข้อ และขอให้ท่านได้แสดงความคิดเห็นให้ตรงกับความเป็น

จริงให้มากที่สุด และขอขอบคุณท่านที่ให้ความร่วมมือในการตอบแบบสอบถามเป็นอย่างดี

ขอแสดงความนับถือ

นางสาวภาวิณี เนียมสุวรรณ

นักศึกษาปริญญาโท สาขาภาษาอังกฤษเชิงอาชีพเพื่อการสื่อสารนานาชาติ

สถาบันภาษา มหาวิทยาลัยธรรมศาสตร์

<u>ส่วนที่ 1</u> ข้อมูลทั่วไปของพนักงาน

<u>คำชี้แจง</u> โปรดทำเครื่องหมาย ลงใน √ หน้าข้อความ และกรอกข้อมูลให้ครบทุกข้อตามความเป็นจริงเกี่ยวกับตัวท่าน

1.   อายุ ( ) 20-29 ปี   ( ) 30-39 ปี

               ( ) 40-49 ปี   ( ) 50-59 ปี

2.   เพศ   ( )   หญิง   ( )   ชาย

3.   ระดับการศึกษา   ( ) ต่ำกว่าปริญญาตรี

               ( ) ปริญญาตรี

               ( ) ปริญญา

               ( ) ปริญญาเอก

4.   ระยะเวลาในการทำงาน ( )   1-5 ปี

               ( )   6-10 ปี

               ( )   11-15 ปี

               ( )   16-20 ปี

               ( )   21-25 ปี

               ( )   26-30 ปี

               ( )   31-35 ปี

               ( )   36 ปีขึ้นไป

5.   ท่านคิดว่าภาษาอังกฤษมีความสำคัญต่องานของท่านหรือไม่   ( )   สำคัญ   ( )   ไม่สำคัญ

6.   ท่านคิดว่าการอบรมการใช้ภาษาอังกฤษที่บริษัทจัดให้มีความเพียงพอหรือไม่   ( )   เพียงพอ ( ) ไม่เพียงพอ

7.   ท่านเข้ารับการอบรมการใช้ภาษาอังกฤษที่ทางบริษัทจัดขึ้นครั้งล่าสุดผ่านมาแล้ว...........ปี.............เดือน

8.   ระหว่างการทำงาน ท่านได้ต้อนรับชาวต่างชาติหรือไม่

      ( ) ใช่   ถ้าใช่ โปรดระบุจำนวนครั้ง

      ( ) 1-3 ครั้ง   ( ) 4-6 ครั้ง   ( ) 7-10 ครั้ง   ( ) มากกว่า 10 ครั้ง ระบุ......ครั้ง

      ( )ไม่ใช่

9.   ระหว่างการทำงาน ท่านได้สื่อสารกับชาวต่างชาติหรือไม่

          ( )   ใช่

          ถ้าใช่ โปรดระบุจำนวนครั้ง

( ) 1-3 ครั้ง   ( ) 4-6 ครั้ง   ( ) 7-10 ครั้ง   ( ) มากกว่า 10 ครั้ง ระบุ......ครั้ง

( ) ไม่ใช่

10. ระหว่างการทำงาน ท่านได้เดินทางไปปฏิบัติงานที่ต่างประเทศหรือไม่

( )   ใช่ ( ) 1-3 ครั้ง   ( ) 4-6 ครั้ง   ( ) 7-10 ครั้ง   ( ) มากกว่า 10 ครั้ง ระบุ......ครั้ง

ถ้าใช่ โปรดระบุจำนวนครั้ง

( )   ไม่ใช่

11.   ท่านได้มีการพัฒนาทักษะภาษาอังกฤษท่านอย่างไร

( ) เรียนที่ (เลือกได้มากกว่า 1 ข้อ)   ( ) ศึกษาด้วยตัวเอง (เลือกได้มากกว่า 1 ข้อ)

( ) AUA   ( ) อ่านหนังสือภาษาอังกฤษ

( ) British Council   ( ) ฟังบทสนทนาจากอินเตอร์เนต

( ) ECC   ( ) พูดคุยกับชาวต่างชาติ

( ) สภาบันสอนภาษาของมหาวิทยาลัย   ( ) อ่านนิตยสาร

( ) อื่นๆ โปรดระบุ.........   ( ) อ่านหนังสือพิมพ์

                                            ( ) ฟังเพลง

                                            ( ) ดูหนัง

                                            ( ) อื่นๆ โปรดระบุ............

12.   ท่านคิดว่าทักษะภาษาอังกฤษต่อไปนี้ของท่านอยู่ในระดับใด

ทักษะ	ดีมาก (5)	ดี (4)	ปานกลาง (3)	ไม่ค่อยดี (2)	ไม่ดี (1)
การฟัง					
การพูด					
การอ่าน					
การเขียน					

<u>ส่วนที่ 2</u> ความคิดเห็นเกี่ยวกับความต้องการและปัญหาในการใช้ภาษาอังกฤษของช่างซ่อมบำรุงรักษาอากาศยานขั้นหนัก

<u>คำชี้แจง</u> โปรดทำเครื่องหมาย √ ลงในช่องว่างทาง <u>**ซ้ายมือ**</u> เพื่อระบุระดับความต้องการในการใช้ภาษาอังกฤษของท่านใน

สถานการณ์ต่างๆ และโปรดทำเครื่องหมาย √ ลงในช่องว่างทาง <u>**ขวามือ**</u> เพื่อระบุระดับปัญหาที่ท่านประสบในการใช้ภาษาอังกฤษ

ในสถานการณ์ดังกล่าว

ท่านมี**ความต้องการ**ใช้ทักษะภาษาอังกฤษในสถานการณ์ต่อไปนี้มากน้อยเพียงใด และแต่ละทักษะเป็น**ปัญหา**สำหรับท่านมากน้อย

เพียงใด

ระดับความต้องการ						ระดับปัญหา				
มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด	ทักษะ	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
					ฟัง					
					พูด					
					อ่าน					
					เขียน					

1. ท่านมี**ความต้องการ**ใช้ทักษะภาษาอังกฤษในสถานการณ์ต่อไปนี้มากน้อยเพียงใด และแต่ละสถานการณ์เป็น**ปัญหา**

สำหรับท่านมากน้อยเพียงใด

การใช้ทักษะด้านการฟัง

ระดับความต้องการ						ระดับปัญหา				
มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด	สถานการณ์	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
					ฟังและเข้าใจบท สนทนาทั่วไป					
					ฟังและเข้าใจ คำถามเกี่ยวกับ การทำงาน					
					ฟังและเข้าใจคำ บรรยายเกี่ยวกับ อะไหล่เครื่องบิน					
					ฟังและเข้าใจ ผู้บังคับบัญชา ชาวต่างชาติ					
					ฟังและเข้าใจบท					

ระดับความต้องการ					สถานการณ์	ระดับปัญหา				
มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด		มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
					บรรยายโดยวิทยากรชาวต่างชาติ					
					ฟังและเข้าใจผู้ตรวจสอบคุณภาพชาวต่างชาติ					
					ฟังและเข้าใจบทสนทนาทางโทรศัพท์					
					ฟังและเข้าใจผู้ร่วมงานชาวต่างชาติเมื่อไปทำการซ่อมหรือบำรุงรักษาอากาศยานที่ต่างประเทศ					
					ฟังและเข้าใจสำเนียงที่หลากหลาย					
					ฟังและเข้าใจคำศัพท์ใหม่ๆ					
					อื่นๆ (โปรดระบุ)……………					

การใช้ทักษะด้านการพูด

ระดับความต้องการ					สถานการณ์	ระดับปัญหา				
มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด		มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
					กล่าวแสดงการทักทายหรือแนะนำตัว					
					กล่าวแสดงความต้องการ					
					ให้คำแนะนำและอธิบายข้อมูลด้านการทำงาน					
					เสนอความช่วยเหลือ					
					สอบถามคำถามต่างๆ					
					สนทนาโต้ตอบทางโทรศัพท์					
					แสดงการขอโทษเมื่อความผิดพลาดเกิดขึ้น					
					อธิบายสาเหตุของความผิดพลาด					

					สอบถามหรือกล่าวย้ำคำถามหรือข้อความที่ไม่เข้าใจ				
					ออกเสียงสระและพยัญชนะภาษาอังกฤษได้อย่างถูกต้อง				
					ออกเสียงเน้นคำหนักเบา (STRESS) ได้อย่างเหมาะสม				
					พูดตามท่วงทำนองที่ถูกต้อง (INTONATION)				
					พูดสื่อสารโดยใช้คำศัพท์เฉพาะทางการบินได้อย่างถูกต้อง				
					อื่นๆ (โปรดระบุ)............…				

การใช้ทักษะด้านการอ่าน

ระดับความต้องการ					สถานการณ์	ระดับปัญหา				
มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด		มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
					อ่านข้อมูลจากสิ่งพิมพ์ภาษาอังกฤษทั่วไป					
					อ่านจับใจความหลัก					
					อ่านข้อตกลงและสัญญา					
					อ่านข้อมูลจากเอกสารใบสั่งงาน (TASK CARD)					
					อ่านข้อมูลจากแฟ็กซ์					
					อ่านข้อมูลจากอีเมล์					
					อ่านข้อมูลจากเอกสารการบำรุงรักษาอากาศยาน (CMM, AMM, SB, IPC, SRM,					

					SIL)					
					อ่านข้อมูลจากเอกสารใบงาน (WORK ORDER)					
					อ่านข้อมูลข่าวสารของบริษัท					
					อ่านข้อมูลจากเอกสารมาตรฐานในการเดินอากาศ (FAA and EASA Certificate of Airworthiness)					
					อ่านข้อมูลจากเวปไซด์ภาษาอังกฤษขององค์กรการบินที่เกี่ยวข้อง					
					อื่นๆ (โปรดระบุ)………… …					

การใช้ทักษะด้านการเขียน

ระดับความต้องการ						ระดับปัญหา				
มาก ที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด	สถานการณ์	มาก ที่สุด	มาก	ปาน กลาง	น้อย	น้อย ที่สุด
					เขียนจดหมาย สมัครงาน					
					เขียนอีเมล์					
					เขียนรายงาน ประจำวัน					
					เขียนเอกสารใบ งาน (WORK ORDER)					
					เขียนเอกสาร ใบสั่งงาน (TASK CARD)					
					เขียนบันทึก					
					เขียนเอกสาร การซ่อมบำรุง					
					เขียนเอกสารขอ วีซ่าหรือใบ ตรวจคนเข้า เมือง					
					อื่นๆ (โปรด ระบุ).........					

ส่วนที่ 3 ท่านมีข้อคิดเห็นและข้อเสนอแนะ อย่างไรในการจัดการเรียนการสอนภาษาอังกฤษสำหรับช่างซ่อมบำรุงรักษาอากาศยาน

ขั้นหนัก

1. ท่านเห็นด้วยกับการจัดการเรียนการสอนและการใช้สื่อการเรียนต่อไปนี้ในระดับใด

    คำชี้แจง โปรดทำเครื่องหมาย √ ในช่องว่างแต่ละข้อ โดยหมายเลขแต่ละข้อมีความหมายดังนี้

    5 – เห็นด้วยอย่างมาก

    4 – เห็นด้วย

    3 – ไม่มีความเห็น

    2 - ไม่เห็นด้วย

    1 – ไม่เห็นด้วยอย่างมาก

การเรียนการสอนและสื่อการเรียน	เห็นด้วยอย่างมาก	เห็นด้วย	ไม่มีความเห็น	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างมาก
ท่านต้องการให้มีการสอนทักษะ ฟัง พูด อ่าน เขียน ในอัตราส่วนที่เท่ากัน					
ท่านต้องการให้สอนโดยเน้นทักษะฟัง					
ท่านต้องการให้สอนโดยเน้นทักษะพูด					
ท่านต้องการให้สอนโดยเน้นทักษะอ่าน					
ท่านต้องการให้สอนโดยเน้นทักษะเขียน					
ท่านต้องการให้อาจารย์สอนแบบบรรยายเท่านั้น ไม่เน้นทักษะใดทักษะหนึ่งเป็นพิเศษ					
ท่านต้องการให้ผู้เรียนมีส่วนร่วมในกิจกรรมการเรียนการสอน					
ท่านคิดว่าใช้สื่อที่เป็นตำราเรียนอย่างเดียวก็เพียงพอ					

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ท่านคิดว่าท่านต้องการเรียนโดยใช้สื่อที่หลากหลาย เช่น วีดีโอ เทปบทสนทนา					
ท่านต้องการให้มีการประเมินผลหลังการเรียน					
อื่นๆ (โปรดระบุ)...					

คำชี้แจง โปรดทำเครื่องหมาย √ ในวงเล็บหน้าคำตอบที่ท่านต้องการที่สุด

1. ท่านต้องการให้หลักสูตรการอบรมมีระยะเวลา

( ) น้อยกว่า 30 ชั่วโมง โปรดระบุจำนวนชั่วโมง ....

( ) 30 ชั่วโมง

( ) มากกว่า 30 ชั่วโมง โปรดระบุจำนวนชั่วโมง ....

2. ท่านต้องการให้ ตารางเรียนเป็นอย่างไร

( ) เรียนสัปดาห์ละครั้ง จนครบจำนวนเวลาของหลักสูตร

( ) เรียนต่อเนื่องทุกวันในเวลา 1 สัปดาห์

( ) เรียนต่อเนื่องทุกวันในเวลา 2 สัปดาห์

( ) เรียนต่อเนื่องทุกวันในเวลา 3 สัปดาห์

3. ท่านต้องการเรียนครั้งละกี่ชั่วโมง

( ) 1 ชั่วโมง

( ) 2 ชั่วโมง

( ) 3 ชั่วโมง

( ) อื่นๆ โปรดระบุ........

4. ท่านต้องการเรียนกับ

( ) อาจารย์เจ้าของภาษาเท่านั้น

( ) อาจารย์ไทยเท่านั้น

( ) อาจารย์เจ้าของภาษา และอาจารย์ไทย แบ่งหัวข้อกันสอน

( ) อาจารย์เจ้าของภาษาโดยมีอาจารย์ไทยเป็นผู้ช่วยสอน

5. ท่านมีข้อเสนอแนะอย่างไรในการจัดการเรียนการสอนหลักสูตรภาษาอังกฤษสำหรับช่างซ่อมบำรุงรักษาอากาศยานขั้น

หนัก

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ขอขอบคุณทุกท่านที่สละเวลากรอกแบบสอบถามนี้อย่างครบถ้วนสมบูรณ์ ☺

BIOGRAPHY

Name: Ms. Pawinee Niamsuwan

Date of birth: October 25, 1983

Educational Attainment: 2006, Bachelor in Business Administration, Kasetsart University