

# A Case Study of Engineers in Auto-Parts Company's Needs for Business Communication in English

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**Abstract:** *This study aims to explore the English language needs of engineers at Auto-Parts Company in an eastern industrial estate of Chachoengsao. In addition, the study also examined their English language problems and wants. The findings of the study may provide some guidelines for the organization to design an English course to fulfill their needs.*

*This study is comprised of seventy engineers from three departments: Conventional, Quality Assurance, and Engineering. The participants were selected by a purposive sampling technique. Two research tools were used to collect data: questionnaire and semi-structured interview. The data gathered from the questionnaire were categorized and analyzed by using descriptive statistics: percentage, frequency distribution, arithmetic mean, and standard deviation. The data from the semi-structured interviews were transcribed and analyzed to support the results of the questionnaire.*

*As a Result of the research study showed that speaking and listening were most needed of the four skills while reading and writing skills were average as moderate needs, but they still had a high need for some activities such as reading and writing email and reading operation manuals. This is not a surprising finding because these activities are very important for engineers. The results of the English problems from the questionnaire and interviews showed that both speaking and listening skills were the most problematic for their jobs while writing and reading skills were at a moderate level.*

*The implications of this study are that the degree of English language skills that the engineers need to improve is parallel to the degree of problems they had in these skills. Therefore, the main focus of English training for engineers should be on speaking and listening skills while supplementing these with writing and reading skills to help them perform more effectively in their daily tasks.*

**Keywords:** Needs analysis, English language needs of the engineers

## Introduction

Brudhiprabha (2016, p. 1) summed up that every human activity cannot be carried on without the use of language. Language is part and parcel of man. **“Even the deaf and dumb attempt to communicate through the sign language of their mother tongue”.**

The focus of this study is on ‘Engineering English.’ English for Engineering branched from English for Specific Purposes (ESP). Dudley-Evans and St. John (1998) posited that ESP courses are designed to meet the specific needs of the learners. ESP philosophy can be used in order to carry out the specific needs of the learners (Robinson, 1991). Therefore, to meet the needs of the learners a needs analysis should be conducted. To do this, the specific purposes for how the learner will use the language, the kind of language to be used, the

starting level, and the target level to be achieved are taken into account. The information can be obtained from a range of different individuals such as company staff, trainers, and the learners themselves. It will have implications for future training approaches.

Research evidence showed that what postgraduate engineering students at Chulalongkorn University wanted to improve most were listening, speaking and writing skills (Tubtimtong, 1993, p. IV-V). With respect to this study, the findings suggest that English courses should conform to the actual needs of the engineers who need to use English in their jobs. As a result, the English courses should be designed to meet the specific needs of the engineers to help them more effectively perform their daily tasks.

English became the sole official and working language of ASEAN as of December 31, 2015. The increasing demand of English in ASEAN countries has contributed to a trend in schools for studying English. The English skills are particularly important for professionals who deal with international coworkers, customers, clients or suppliers (Srisuwan & Kardkarnklai, 2014). Engineers need the skills to be able to communicate effectively in speaking, listening, reading and writing, in order to understand English interactions (Srisuwan & Kardkarnklai, 2014). This is particularly important for those dealing with international communications from any country in the region (Mackenzie, 2014). According to Pinyosunun (2006), Thais' level of English proficiency is low in comparison with many countries in Asia. Similar to Wiriyaichitra (2001), Thais' level of English proficiency is low in comparison with many countries in Asia (e.g., Malaysia, the Philippines, and Singapore). Companies are looking for employees who can carry out various tasks effectively in English, and they also require employees to have good command of oral communication skills (Stevens, 2005).

This study can help with designing appropriate English training courses regarding the needs which benefit their jobs, and also can help the organization improve employees' English capabilities and job performance.

This study has the following research questions:

1. What English language skills do engineers need to perform their job?
2. What English language problems do engineers encounter when communicating in the workplace?
3. What English language skills do engineers want to focus on for improving their business communication skills?

The main significance of this study is its practical importance for the organization under examination. By conducting a needs analysis, identifying specific English communication issues, and determining the training needs of employees, this study can help the organization improve employees' English capabilities and job performance. If this training program is used, the organization would be much more competitive because its employees could gain the ability to communicate better customers and suppliers in Thailand at large.

## Research Methods

Qualitative and quantitative methods of investigation were used based on the Parallel Design of the Duos as Separate Studies (Brudhiprabha, 1986, p. 2).

First, a qualitative method was utilized by using a questionnaire to explore the English language needs, problems and wants of engineers at Auto-Parts Company in the eastern industrial estate, Chachoengsao, Thailand.

Second, a qualitative method was employed by a semi-structured interview to get information about the needs and problems in using English, as well as the opinions of what to focus on for improving their business communication skills.

### Population

The participants for this study were 85 factory engineers who were working at Auto-Parts Company in an eastern industrial estate in Chachoengsao, Thailand.

### Sample

The sample of the quantitative study was selected based on Krejcie & Morgan (1970). The sample size of this study was calculated to be 70 engineers from three departments, namely the Conventional Department, Quality Assurance Department, and Engineering Department.

The qualitative study consisted of six informants (engineers) from each department that were selected by purposive sampling.

### The Summary of Selected Informants for the Study

Informant no.	Gender	English level	Department
1	Male	Fair	Conventional
2	Male	Fair	Conventional
3	Male	Poor	Engineering
4	Female	Good	Engineering
5	Male	Fair	Quality Assurance
6	Male	Fair	Quality Assurance

Source: Adapted from Al-Shboul, Ahmad, Nordin, and Rahman (2013, p. 5)

### Data Collection of Questionnaire

The data was collected after the Research Ethics Committee of Burapha University approved the proposal. After the pilot study was revised, the data collection for this research was conducted at Auto-Parts Company in an eastern industrial estate at Chachoengsao Province.

Before going through the data collecting step, an official letter was issued to ask for permission from the Engineering Department Manager of Auto-Parts Company in eastern industrial estate at Chachoengsao Province.

The purpose and the instructions for data collection of the study were explained to the participants and all questions or concerns from the participants were clarified before starting the data collection. Therefore, with the cooperation from the Factory Manager of Auto-Parts Company in eastern industrial estate at Chachoengsao Province, I visited to introduce myself and the purpose of the study to the participants and to ask for their cooperation. The researcher also explained about their voluntary involvement in the study and that their responses on the questionnaire would be kept confidential and private and used only for academic research. After that, the questionnaires in the Thai version were distributed to the participants because it was easier for them to understand the instructions that were written in Thai, and allowing them 10 to 15 minutes to complete. The questionnaires were collected the same day that they were given to the participants and the other five sets were collected the day after because five participants were not in the office on the day the questionnaires were distributed.

The researcher distributed 70 questionnaires to the sample. The returned questionnaires were 100 % of the total number of distributed questionnaires.

The Index of Objective Congruence (IOCs) of the questionnaire for the validity test from the three experts was 0.826 and the Cronbach's Alpha for the reliability test with seven engineers was 0.94.

### **Data Collection of the Interviews**

The data was collected after the Research Ethics Committee of Burapha University approved the proposal. The questions in the interview mainly investigated the participants' needs, problem, and wants of English language skills in their jobs. Because the informants were business people with limited time, the week after collecting the questionnaires the researcher made appointments with those willing to participate in interviewing after work. To collect the interview data, researcher took the following steps:

- 1) The researcher explained the purpose of the interviews so that the interviewees had a clear understanding of what they were participating in.
- 2) The researcher conducted the interviews. The interviews were conducted them in Thai because it was easier for the interviewees.
- 3) The interviews were recorded by using a mobile phone recorder, notebook, and pen during the interviews.

### **Data Analysis of Questionnaire**

The data were categorized and analyzed by using descriptive statistics: percentage, frequency distribution, arithmetic mean, and standard deviation. All data collected from the questionnaires were analyzed as below:

Research question 1: What English language skills do engineers need to perform their job?

Research question 2: What English language problems do engineers encounter when communicating in the workplace?

Research question 3: What English language skills do engineers want to focus on for improving their business English communication skills?

In order to answer these questions, a five-point Likert Scale was used to score the extent of their needs and problems in using English, as well as to rate their opinion of the English skills that need to be focused on in the English training course. The criteria used for scoring is as follows:

#### **English Language Problems**

A Likert Item of English Language Problems

	<b>Scale</b>	<b>Mean range</b>
5	very high problems	4.50-5.00
4	high problems	3.50-4.49
3	moderate problems	2.50-3.49
2	low problems	1.50-2.49
1	very low problems	1.00-1.49

### English language Necessity (Needs)

A Likert Item of English Language Necessity (Needs)

	Scale	Mean range
5	very high needs	4.50-5.00
4	high needs	3.50-4.49
3	moderate needs	2.50-3.49
2	low needs	1.50-2.49
1	very low needs	1.00-1.49

### English Language Skills Wants to Focus on for Improving

A Likert Item of English Language Skills Wants to Focus on for Improving

	Scale	Mean range
5	very high wants	4.50-5.00
4	high wants	3.50-4.49
3	moderate wants	2.50-3.49
2	low wants	1.50-2.49
1	very low wants	1.00-1.49

Frequency distribution and percentage were used in the analysis of answers concerning the respondents' general background information and wants regarding time and duration for an English training course.

### Data Analysis of Interviews

The oral interview questions were transcribed and analyzed to support the results of the questionnaire. The data analysis was categorized by identifying for three themes as follows:

- 1) Words relating on needs of English skills
- 2) Words relating on problems of English skills
- 3) Words relating on wants of English skills

In addition, the process of data analysis is as follows:

- 1) Organizing the data
- 2) Evaluating the data for its usefulness and relevance to the interview questions
- 3) Searching for alternative explanations
- 4) Writing the report

The informants were all Thai, so the researcher conducted the interviews in Thai. After doing the interviews, the researcher transcribed them in Thai first, and then translated the Thai transcription into English.

To check the translation, the researcher sent the interview records and translated English papers to her older sister who has a Master's Degree in English.

### Summary of Findings

#### Problems of English Usage in the Workplace

The findings revealed that the engineers perceived that speaking and listening were the most problematic skills. While writing and reading were the third and fourth most problematic, respectively.

### *Speaking skills*

The results illustrated that the greatest obstacles impeding their speaking English were nervousness and lack of confidence when speaking English with foreigners. They were concerned with the correct grammar, expressing complex ideas, and the right words in conversations as it could be improper word usage that was leading to miscommunication.

### *Listening skills*

The respondents felt that they had high problems in listening skill. They got nervous when listening to conversations with foreigners, did not understand unfamiliar accents and pronunciation of Native and Non-native speakers (NNSs), and they also did not understand rapid speech.

### *Writing skills*

Most activities involving writing skills were perceived as moderate problems. Whereas, two activities were perceived as big problems: unable to use the correct grammar and unable to use the correct connectors.

### *Reading skills*

All activities were perceived as moderate skill. The respondents had problems speed of reading. They read too slowly, not understanding technical terms and could not getting the main ideas of the texts.

## **Needs of English Usage in the Workplace**

The findings revealed that all four skills were needed by the engineers for their jobs. Speaking and listening skills were perceived as high needs such as giving presentations/ describing business activities, and listening to face to face conversations (e.g., small talk, greeting customers). Both reading and writing skills were considered as moderate needs. However, when both skills were considered separately in different activities, some activities were perceived as high needs: reading email, reading operation manuals/ maintenance manuals, writing presentations and writing emails.

### *Speaking skills*

The speaking activities were received as the high level of need such as giving presentations / describing business activities, asking for information and negotiating.

### *Listening skills*

The listening activities that the respondents had a high need were listening to face to face conversations (e.g., small talk, greeting customers), listening to descriptions/explanations (e.g., during training/workshops) and listening while attending international conferences.

### *Reading skills*

Most activities were perceived as moderate needs, except reading e-mail, operation manuals and maintenance manuals, which were the highest by the respondents.

This was the same as writing skills, the writing activities that the respondents had high needs for were writing presentations and e-mail.

## **Wants to focus on for improving English**

All of the respondents would like to have an English training course. The majority of the respondents wanted to learn in an English class that focuses on speaking, listening, writing, and reading skills. For the speaking and listening class, the respondents were concerned about the course duration, most of them preferred a fifty-hour course, with two hours per class. Most of the respondents wanted to take an English class twice a week, and all of them wanted to study after work.

## Discussion of the Major Findings

### **Research question 1: What English language skills do engineers need to perform their job?**

Among the four English skills, the engineers identified that they very much needed to use speaking and listening skills, as their first and second considerations (the highest level of rating while reading and writing were moderate needs of the rating. The findings of this study are in some ways similar to Maithong's study (2011).

According to Maithong (2011), the results revealed that the most significant for them were listening and speaking, followed by writing and reading skills. Similarly, studies in other countries also show that listening and speaking skills were most important because they were the most frequently used to perform their work effectively (Tinh, 2015).

The results were the same as the interviews, most of the engineers felt that speaking and listening were the most needed skills for them: one of them felt that speaking was the only need for him. The reasons for English communication skills were the needs for jobs were speaking, listening and discussing with customers, suppliers, and supervisors.

It can be concluded that listening and speaking are the skills that engineers extremely need because engineers have to communicate in English every working day, with people of many different nationalities and first languages such as customers, suppliers, and supervisors.

While the average mean score of reading and writing were moderate needs for engineers, it could be explained by the fact that there were high needs for some job activities, especially reading skills (e.g., reading operation manuals/maintenance manuals) and reading import trade-related documents (e.g., letter of credit, quotations, invoices). This could be because the engineers need to read manuals and other related documents, and most of them are written in English.

The reading and writing e-mail were also high rated needs for them, so it can be said that reading and writing email in English have become the preferred channel for business communication used all over the world in the age of globalization.

This is to say that the engineers mostly need to conduct face-to-face communication with foreign people. In addition, reading and writing in English are also needed for them.

### **Question 2: What English language problems do engineers encounter when communicating in the workplace?**

The findings of the study show that speaking and listening skills are highly problematic. This result can be found in other studies, such as Chitpupakdi (2014), Warawudhi (2013), Yhouyhen (2008), Phutirat and Suwannapat (2007). They revealed similar results that the major problems were speaking and listening skills.

Chitpupakdi (2014) examined the needs, problems, and the proposed learning course of executive staff (CI) in using English communication at Carpets International Thailand. The results showed that the major problems were listening and speaking skills.

Warawudhi (2013) also surveyed the problems in using the English language of fourth-year students who enrolled in a Practicum course in the first semester of 2013 in Burapha University. The findings showed that speaking and listening skills were the first and second ranked problems in their internship.

Yhouyhen (2008) investigated the English language needs of 74 information officers at the Bangkok Tourist Division. The research found that speaking and listening were the most serious problems for them.

Similarly, Phutirat and Suwannapat (2007) investigated the problems, needs and wants of English for hospital pharmacists. Listening skills were the most serious problem for hospital pharmacists followed by speaking skills.

The findings from the interviews of those engineers considered English speaking and listening as the most serious problems to perform their routine work. Though, in general, they have the highest need to use English listening and speaking in their jobs, the listening and speaking skills were needed to be improved more than reading and writing.

It could be explained that among the four skills, many people feel that speaking in a new language is harder than other skills because it happens promptly, so they cannot revise what they want to say.

As we know, English is learned as a foreign language at school and universities in Thailand, so English is rarely used in daily life. This may be one reason why they are not good in English listening and speaking. As a result, they may experience difficulty in some areas when they speak English at work. In this case, the engineers revealed that they encountered the most problems in speaking followed by listening, writing and reading, respectively.

### **Question 3: What English language skills do engineers want to focus for improving their business communication skills?**

The results of the engineers' wants from both question and interview had similar results. The results revealed that speaking and listening were the highest wants for improving skills. These results are congruent with previous studies, for example Nomnian (2014) and Suzana(2008).

Nomnian (2014) revealed the first need for improving speaking skills in the service business in communicative English with international tourists visiting in Kanchanaburi province.

Similarly, Suzana(2008) investigated the English communication skills needs in the workplace for practicing engineers' studies. The results showed that they should focus on developing and improving the undergraduate engineering students in speaking and listening skills to prepare for their future jobs.

In summary, the respondents wanted to focus on their speaking and listening skills more than other skills. Therefore, they would like to study listening and speaking in any future courses.

## **Conclusions**

This study reveals the details of needs and problems in using English for the engineers of Auto-part as well as their wants regarding English training. The information obtained from this study should be taken into account when designing an appropriate course for the employees so that they will gain optimal advantage from the courses.

The researcher hopes that the findings from this study can be used as valuable guidelines for course designers to develop a specific English course for the engineers in this company and other organizations that have similar types of businesses.



## Recommendations

### Recommendations for Further Practice

1) The importance of this study is the recognition of the English language needs of engineers, so the Training department can use the results to plan an English course according to engineers' needs appropriate to their jobs.

2) The organization can apply the results of this research to meet the requirements when they recruit engineering candidates and also can help the organization improve employees' English capabilities and job performance (Berman, Rose, Sachar, Greenstein, Davies, & Elijovich, 1984).

### Recommendations for Further Research

1) The research concerned the needs of English communication skills of engineers at Auto-parts companies in Thailand and its results were only from the 70 Thai engineers of the departments that are relevant to this study. There are various departments that should be researched and it would be very useful if the future research focuses on the problems of communication skills that foreigners working in Thailand face.

2) Future research should include Thai personnel in other sections which will be able to work freely in other countries in the ASEAN Economic Community (AEC) such as nursing, architecture, surveying, medicine, dentistry, accounting, and hotel and tourism in order to compare the English needs and skills of each section.

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