

Gender Differences in Motivational Orientations of Thai EFL Students from Science and Technology Background

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Abstract

Motivation plays an important role in learning a foreign language. Gender is also considered an important component in language learning. Previous studies have posited the importance of gender differences in the motivational orientations of students (Mandel & Marcus, 1988; Greene & De Backer, 2004; Kissau, 2006). However, gender differences in motivational orientation of university level Thai EFL students have received little consideration. Thus, this study attempted to investigate gender differences in motivational orientation of Thai EFL undergraduate level students of science and technology fields who studied English Conversation 1 course at King Mongkut's University of Technology, North Bangkok. Gardner's Attitude/Motivation Test Battery (AMTB) and qualitative inquiry were employed to conduct this study. The findings revealed that EFL students were highly motivated to study English albeit the level of instrumental motivation was slightly higher than integrative motivation. In terms of gender, this study revealed that there is no significant difference in terms of how motivated male and female students were. However, female students showed a greater level of motivation than males regarding both types of motivational orientations. Female students demonstrated a high level of instrumental and integrative orientations whereas male students demonstrated a high level of instrumental orientation but a slightly lower level of integrative motivation.

Keywords : motivation, gender, instrumental motivation, and integrative motivation

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1. Introduction

Motivation affects language learning (Lambert, 1963). In fact, motivation is considered a key component of language learning achievement (e.g. Gardner, 1985; Brown, 2000). Though the concept of motivation has widely been used in various studies, there has been little agreement on its exact definition until now. According to Dörnyei (2005), this is due to the abundance of theories and models that provide different meanings on this particular concept. McDonough (1981) ironically quotes the term ‘motivation’ as a dustbin that is used to “include a number of possibly distinct components, each of which may have different origins and different effects and require different classroom treatment”. However, despite numerous widely used concepts on motivation, there is a consensus that motivation plays a vital role in the success of every individual.

Gender has an important effect on attitude, motivation and language learning process (Akram & Ghani, 2013). Therefore, it is imperative to consider how gender affects the language learning motivation of university level students. In fact, the importance of gender on language learning motivation is evidenced by considerable scholarly interest internationally in relation to the intersection between gender and motivation of students. In Thailand specifically, many studies have been conducted on motivation and its impact on language learning outcomes. However, the impact of gender on motivation of language learners has received little consideration.

Various studies on gender differences in foreign language learning have revealed that females are more motivated to learn foreign languages than males (e.g. Dörnyei, Csizer & Nemeth 2006; Mori & Gobel, 2006). Degang (2010) investigated the level and type of English language learning motivation of 50 second - year Thai students majoring in Business English at Assumption

University. The study revealed that students were relatively highly motivated and were found to be close to being equal in instrumental and integrative motivation. Similarly, a study by Wimolmas (2013) showed that students were relatively highly motivated and found to be slightly more instrumentally motivated to learn English. On the same notion, Kitjaroonchai & Kitjaroonchai (2012) revealed that Thai students majoring in English at Asia - Pacific International University had high levels of integrative and instrumental motivation to learn English while their instrumental motivation was found slightly higher than their integrative motivation. Likewise, when Kitjaroonchai (2013) conducted a study on motivation toward English language learning of students in secondary and high schools, he revealed that students had high levels of both integrative and instrumental motivation to learn English language; however, instrumental motivation was slightly higher than integrative motivation.

Few studies on the effects of gender differences on language learning motivation of students in Thailand exist, but are limited in their consideration of gender influence. Khamkhien (2010) found that Thai male and female students differ in their use of cognitive skills when applied to language learning strategies. Another study carried out among Thai high school students identified influence of ability, beliefs and motivation orientation on self - efficacy (Lerdpornkulrat, Koul & Sujivorakul, 2012). However, little has been done in the area of identifying gender influence on motivational orientations of university level EFL students. Investigating gender perspective on motivation is of vital importance in its ability to enhance student interests and performance in language learning. Although research studies on gender and language learning motivation are common internationally, reflections and distinctions in the type of motivational orientations between male and female EFL students have not been made explicit specifically in a Thai

context. Thus, this study intended to investigate the prevalence of the effect of gender differences on motivation and also the dominance of either instrumental or integrative motivations among Thai EFL students.

2. Objectives

This study was carried out to 1) identify the kind of motivation EFL students had at King Mongkut's University of Technology North Bangkok (KMUTNB); 2) determine whether gender affects the motivational orientation of students and; 3) identify major factors that influence the type of motivational orientation students have.

3. Research Questions

3.1 What kind of motivation (instrumental or integrative) do Thai students in the field of science and technology have in learning English as a foreign language (EFL) at KMUTNB?

3.2 Does gender difference affect the motivational orientation of Thai students?

3.3 What are the factors that affect the motivational orientation of different genders?

4. Literature Reviews

The literature review section includes the definition of motivation, theoretical framework for different types of motivation and also the findings of various research, especially in Thai context, related to the trend of motivation in learning EFL among male and female students.

4.1 Definition of Motivation

The word "motivation" is a widely used term but it's meaning has been portrayed differently by different researchers. Dörnyei (1998) claimed that the abundance of motivation theories developed is the reason behind the confusion for not having an accurate, straightforward meaning of this concept. Motivation is termed to be a multifaceted phenomenon having a wide range of concepts; however, these concepts may vary in each individual depending on different factors and in different

contexts. According to Pintrich and Schunk (1996), 'Motivation is the process whereby goal - directed activity is instigated and sustained'. However, Dörnyei (1998) argued that this process - oriented view of motivation is usually understood as a static mental or emotional state or as a goal but not as a process itself.

During its inception phase, motivation was linked to a behavioral framework to understand "what moved the resting organism into a state of activity," which was basically dependent on concepts like instinct, drive, need, energy and homeostasis (Weiner, 1990). This research had generalized the results that were obtained from animals to apply to humans. For this framework, a reward system was considered to be the key to motivating every individual to achieve his or her goals (Williams & Bruden 1997). However, this understanding of motivation wasn't considered relevant in educational contexts (Weiner, 1990). Hence, the behavioral framework was replaced by cognitive approaches. In the cognitive development theory developed by Piaget, motivation is understood as 'a built - in unconscious striving towards more complex and differentiated development of the individual's mental structures' (Oxford & Shearin, 1994).

Gardner (1985) considered 'motivation' as the single most prominent factor that influences the success rate of students in learning a new language. Without motivation it is hard for every individual to achieve the desired goals in life. Motivation has been widely accepted as one of the key factors to influence the use of language learning strategies, frequency of interaction with speakers of the target language and general language proficiency (Oxford & Shearin, 1994). With the development of cognitive theories, research has shifted more towards determining students choice to engage in academic tasks rather than what they do and the time they spend on doing so (Rueda & Myron, 1995).

Hence, with the influence of cognitive theories on motivation, the concepts of integrative and instrumental orientations came about, which greatly affect the definitions of motivation in today's context. Finally, Dörnyei gave the widely used meaning of the term motivation in 2011. He stated that motivation is determined by considering three key criteria: a person's willingness or choice to do a particular action; the extent to which a person is willing to do that action; and the continuous effort demonstrated to perform that action (Dörnyei, 2011).

4.2 Theories on Motivation

Since the 70s, many theories have evolved focusing on motivation and cognitive shifts. Gardner's widely - accepted theory on motivation laid the foundation in social psychology. However, following key paradigm shifts, three main theories on language learning motivations became instrumental: self - determination theory, the attribution theory and goal theories. An explanation for each of these theories is provided in the next section.

4.2.1 Gardner's theory on motivation

According to Gardner (1985), "motivation is an extent to which an individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity." This notion implies that a learner's desire or purpose of learning language plays an important role in motivating him/her. Motivation basically includes three main components: motivational intensity, desire to learn the language, and an attitude towards the act of learning the language (Gardener, 1985). In line with this, Gardener (1985) further asserted

that for a learner to be motivated, a mixture of all three components is needed. Dörnyei (2003) provides further elaboration. He pointed out that Gardner's theory on motivation includes want/will (cognition), effort, and task enjoyment (impact). It is not justifiable to measure a learner's motivation on the basis of likes and dislikes. A learner may like a foreign language but unless he/she puts the effort in to learn and enjoys learning that particular language, he/she cannot be considered motivated.

Gardener's theory on motivation has three important components: integrative motive, the socio economic model and the Attitude/Motivation test battery (A/MTB). Integrative motive is defined by attitudes reflecting a genuine desire to meet, communicate with, take on characteristics of, and possibly identify with another group (Gardner & Lambert, 1972). It reflects the learner's willingness to know another culture and learn their language. The learner is intrinsically motivated or willing without any external force to engage.

The Socio - economic model is considered to be the most influential aspect of Gradener's motivation theory. It was first proposed by Gardner and Symthe (1975) and has undergone many changes since then (Gardener 1985, Gardener 2000, Gardener 2005). Gardner (2005) states that people who consider their ethnicity a major component to show their identity would have low integrativeness, whereas people who do not consider their ethnicity as a very important element for their identity and are more interested in other people's culture and their communities would have high integrativeness. Thus, it suggests that learners who appreciate other cultures and language have integrative motivation.

The Socio - educational Model

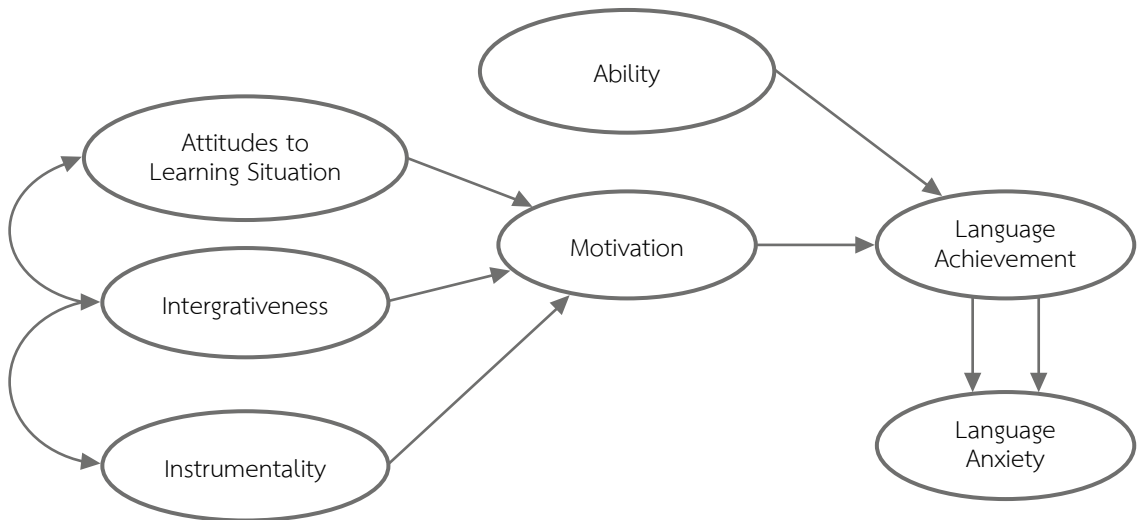


Figure 1 Gardner's socio educational model (2005)

According to Gardner (2005), there are two main reasons for people to learn a different language: integrative motive and instrumental orientation. The former refers to one's ability to understand the language of a community different than one's own whereas instrumental orientation allows the learner to learn a foreign language, for practical reasons, such as getting a good job in the future, achieving good scores in their exams etc. The Gardner's AMTB/Test Battery is an important tool for researchers and scholars to measure integrative and instrumental motivation and to predict the performance or outcome of language learners. It has been widely accepted and used in socio - psychological research. Similar to the socio - educational model, this test has been revised several times to have a better reliability and accuracy in determining the motivational aspects of a learner. The test has a set of statements that requires participants to provide a rating on a scale of 1 to 7 (strongly disagree to strongly agree). Many researchers have adapted the test depending upon the need and relevance on their study. For this particular study, a 5 - Likert scale has been used to

determine how variable influences are for the language learning of the participants.

4.2.2 Self - determination theory

Dörnyei (2003) termed self - determination theory as the most influential theory in motivational psychology. Autonomy is an important factor that indicates self - determination in a learner to learn a foreign or second language (Deci, Conell & Ryan, 1989). According to them, self - determining helps a learner to carefully initiate and check his/her actions. It also makes oneself cautious to take challenges and risks in life. This theory mainly divided motivation into two types: intrinsic and extrinsic motivation. The former stems from an internal need or desire to gain knowledge or to become happy and satisfied. The latter focuses on external rewards such as high paid jobs, better incentives etc.

4.2.3 The Attribution Theory

Weiner's attribution theory is considered as the main theory in social psychology. According to Weiner, there are four kinds of attributions that help us identify why successes and failures happen in life: task difficulty, luck, effort and ability. Out of

these four, two variables, effort and ability are internal while the other two, task difficulty and luck, are external (Weiner, 1990).

4.2.4 Goal theories

Goals play a vital role among learners to sustain their motivation in language learning. The three main goal theories include: goal - setting, goal - orientation and goal content and multiplicity (Eccles & Wigfield, 2002). For goal setting, there are three important areas where goals can differ such as specificity, goal commitment and difficulty (Dörnyei & Ushioda 2011 as cited in Amedi 2013). According to Eccles & Wigfield (2002), if the goal is difficult, it will lead to greater achievement that further leads to the highest performance and next goal orientation is based on performance orientation where students focus more on their ability to get good scores or outperform other students in the class and the last area, goal content and multiplicity focus on student's cognitive representations of what they want to achieve in their lives. This theory relates to the influence of social competence on academic accomplishments. It is related to the view Wentzel (2000) has given. He said, "goals are socially derived constructs that cannot be studied in isolation of the rules and conventions of culture and context."

4.3 Types of Motivation

In particular, motivational orientation in foreign language learning is divided into two distinct orientations: instrumental and integrative motivation. According to Brown (2001), an integrative orientation simply means the learner is pursuing a second language for social and/or cultural purposes, and within that purpose, a high or a low level could drive him/her. Likewise, with an instrumental orientation, learners are studying a language in order to have better career or academic goal and the intensity or motivation of a learner to attain that goal could be high or low (Brown, 2001). Moreover, the former is found to be significant in second

language learning (L2) achievement in a foreign language (FL) context, while the latter contributes to successful L2 learning in a second language (SL) context (Lim, 2012). The learners determine what kind of motivational orientation is useful for them to learn a language in different contexts.

Although integrative orientation has been found to be influential on learners of foreign language, it might be of little use to foreign language students who have little opportunity to communicate with members of the target language community (Dörnyei, 1994 as cited in Kissau, 2006). In regard to instrumental motivation, Hutchinson and Waters (1987) added that it is affected by external need; the learners are not learning a language because they want to (although this does not imply that they did not want to), but rather because they need to. Alternately, integrative motivation is internally generated (or indicative of learner desire) rather than an externally imposed need. In simple words, learners driven by integrative motivation want to learn language to better understand the people who speak that language, while with instrumental motivation, learners want to learn a language to get a high paid job or get admission into particular universities or colleges.

Hence, an important question emerges here regarding the influence of gender differences on integrative and instrumental motivation. Several studies that have been carried out in different places and different contexts show varied results in regard to gender distinctions in motivational orientations. For instance, the study carried by Johnson (2001) on primary school students who learned French in Britain, found higher extent of integrative motivation in girls. However, another study conducted by Lukmani (1972) on sixty girls from a high school in the Mumbai area of India, showed the motivation in girls was instrumental. Likewise, one of the comparative studies in Thailand and Cambodia to investigate English learning motivation among Thai

and Cambodian students revealed that students are mainly instrumentally motivated (Narumon, 2013). Contrary to this result, another study conducted at an English Medium University in Thailand revealed that students majoring in Business English are integratively motivated to learn English (Degang, 2010). It is important to note that gender distinctions are not included in either of these studies. Given that motivational orientations vary depending upon the various factors of a different place and time, there is little published on the effect of gender differences on motivation of university level students in Thailand.

4.4 Motivation and Gender

Motivation in foreign language learning has been greatly associated with learners' identity (Dörnyei, 2005) and gender is considered as one key aspect of learner identity. Gender plays an important role in educational, psychological and linguistic research (Catalan, 2003). In fact, researchers have explicitly correlated the concept of gender differences in motivation (Mandel & Marcus, 1988; Greene & DeBacker, 2004). Based on motivation, male and female students perform differently on different academic tasks and academic achievement varies. Thus, it is interesting to see the impact of gender differences in motivational orientations of EFL students.

According to Cameron (2004), gender is not acquired at an early age; rather, it is an ongoing accomplishment produced by our repeated actions in life. In fact, it is motivation of the individual that reflects his/her attitudes toward the social groups or the environment (Mann, 2006 as cited in Lim, 2012). Moreover, studies have demonstrated that motivation itself is influenced by a host of socio-psychological variables. Many studies have posited that male students lack motivation in comparison to female students (Massey, 1994; Netten, Riggs & Hewlett, 1999; Williams, Burden & Lanvers, 2002).

In terms of gender, there might be no differences on motivation; however, when the components of motivation are examined, the effects of gender differences can be found. For example, Kissau (2006) concluded in his study in schools in Canada that varied differences could be obtained on the basis of motivational component that has been examined. He found that young boys prefer and performed well in mathematics while on the other hand girls performed better on music and writing than boys (Kissau, 2006). Similarly, Amedi (2013) found that more female students like to write in English than male students. One study conducted in Australia, found that once language study becomes optional in high school, males represent only 20% to 40% of total enrolment (Pavy, 2006). Similarly, a study done by Xiong (2010) found that girls were more interested in English and their motivations in learning English were stronger than boys. Though these studies were conducted in different contexts, they found the same result that male students are less motivated than their female counterparts when it comes to language learning. That is why the present study was done with an aim to examine gender differences in relation to motivation to provide more recent data, especially for EFL students in the science and technology field, which hasn't been done before at the university level in Thailand so far.

5. Research Methodology

This study examined the gender differences in motivational orientation of EFL Undergraduate students of English Conversation 1 at King Mongkut's University of Technology North Bangkok. A mixed methodology was employed to identify the gender differences in regard to motivational orientation of students. To sample the target population, two sampling techniques, Cluster Random Sampling and Stratified Random Sampling were employed. The sample thus consisted of 315 students from the

science and technology field out of which 160 students were male and 155 students were female, aged between 20 - 25 years.

5.1 Instrument

For both quantitative and qualitative data analysis, the questions were translated into Thai to avoid any misunderstanding. Before conducting the questionnaire, the students were clearly told that all the information provided will be kept strictly confidential and given the opportunity to express any concerns about their participation in the research. The administration of the questionnaire was supervised to ensure that each student understood the statements correctly.

5.1.1 A set of questionnaires was designed based on the Attitude/Motivation Test Battery (AMTB) (Gardner, 1985). The integrative and instrumental scales of the original 7 - point Likert Scale format of Gardner (1985) were adapted to a 5 - point Likert Scale ranging from 'Strongly Agree' to 'Strongly disagree'. The reliability and validity of the A/MTB has been affirmed (Gardner and Smythe, 1981; Gardener, 1985) and this tool has been widely used in second language motivation studies all around the world (Dörnyei, 2001). In the questionnaire, the first 1 - 10 items were used to assess the instrumental motivation while items 11 - 20 assessed integrative motivation. Statements were chosen based on their suitability, practicality and applicability in the Thai context. Also, students weren't informed about the type of motivation each

item has so as to control the biasness for the responses.

5.1.2 Following the quantitative phase of the study, 10 students were purposively selected for the interview to obtain qualitative data. Stratified sampling was used to select these students to ensure the equal representation of male and female students. Open - ended questions were asked to the students to determine the factors that affect them while learning English as a foreign language. Students were also asked to disclose if there were any barriers that they encountered while learning English. The open - ended questions were divided into two sections. The first section consisted of general information such as name, age, sex, email and telephone number. The second section comprised four parts. The first four questions were asked to understand the type of motivational orientation (integrative or instrumental), each student had. The next two questions were asked to find the motivating factors to learn English as a foreign language and the last two questions were asked to identify the demotivating factors in the classroom and how they could be addressed.

5.2 Results and Analysis

The data thus collected, was computed and calculated to find the mean and standard deviation of each item. For identification of the level of motivation in students of English as a foreign language, the following criteria was set to interpret the mean score as shown in Table 1.

Table 1 Mean score interpretation

Scale	Mean range	Motivational level	Score range
5	strongly agree	very high	4.21 - 5.00
4	agree	high	3.41 - 4.20
3	neutral	average	2.61 - 3.40
2	disagree	low	1.81 - 2.60
1	strongly disagree	very low	1.00 - 1.80

The mean score for each item indicated the level of motivation in students for this, a higher score indicated the higher level of motivation and a lower score indicated the lower level of motivation

for each item. In table 2, the mean and standard deviation (SD) of each item for instrumental motivation is shown and interpretation was done according to the range.

Table 2 Interpretation for instrumental motivation

Items	Statements about motivation	Mean	SD	Interpretation
1	Studying English is important because I will need it for my future career.	4.83	.53	Strongly agree
2	Studying English is important because it will make me more knowledgeable and smart person.	4.44	.70	Strongly agree
3	Studying English is important because it will be useful in getting a good job with a handsome salary.	4.61	.71	Strongly agree
4	Studying English is important for my overseas trips.	4.55	.77	Strongly agree
5	Studying English is important to get the utmost benefits from ASEAN Community 2015	4.53	.73	Strongly agree
6	Studying English will help me to do class assignments and exams.	4.18	.81	Agree
7	Studying English will enable me to search and access more literature resources and reading materials.	4.40	.77	Strongly agree
8	Studying English can lead to more success and achievements in life.	4.30	.83	Strongly agree
9	Studying English is important because other people will respect me more if I know English.	3.70	1.04	Agree
10	My parents feel that it is very important for me to learn English.	4.37	.84	Strongly agree

Similarly in Table 3, for items 11 - 20, the mean and standard deviation of each item for integrative motivation is shown and interpretation was done according to the range.

Table 3 Interpretation for integrative motivation

Items	Statements about motivation	Mean	SD	Interpretation
11	Studying English is important because it will allow me to be more at ease with people who speak English.	4.52	.72	Strongly agree
12	Studying English is important because it will allow me to meet and converse with more and varied groups of people.	4.57	.69	Strongly agree
13	Studying English enables me to better understand the ways in which native speakers live their life.	4.15	.87	Agree
14	Studying English enables me to share my ideas and understanding, discuss in different topics with people from other countries.	4.27	.80	Strongly agree
15	Studying English enables me participate confidently in social, academic and professional activities among other cultural groups.	4.34	.79	Strongly agree
16	Studying English enables me to learn about the culture and social life of English - speaking people.	4.19	.84	Agree
17	Studying English helps me make many friends from different parts of the world.	4.26	.85	Strongly agree
18	Studying English enables me to better understand and appreciate the English art and literature.	3.90	.95	Agree
19	Studying English enables me to have proper accent alike native English speakers.	4.05	.94	Agree
20	Studying English enables me to behave like a native English people with an open mind and confidence.	4.05	.93	Agree

Hence, for the first research question, what kinds of motivation students have, 20 items were grouped according to the type of motivation

and then the mean and standard deviation of each type of motivation were calculated as shown in Table 4.

Table 4 Descriptive Statistics

Motivation	Mean	SD.	Interpretation
Instrumental	4.39	.54	Strongly agree
Integrative	4.23	.63	Strongly agree

It can be clearly seen in Table 4 that the mean score (4.39) and standard deviation (.54) for instrumental motivation is greater than the mean score (4.23) and standard deviation (.63) of integrative motivation albeit there is a slight difference between the mean scores. These results implied that the undergraduate students in the field

of science and technology who studied English Conversation 1 course at KMUTNB in the year 2015 were instrumentally motivated and the instrumental motivation of students was slightly higher at 0.16. To further confirm the result obtained, t - test was employed at 95% confidence level as shown in Table 5 below.

Table 5 Descriptive Statistics

		Paired Differences					t	df	Sig. (2 - tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Instrumental_Mean Integrative_Mean	.16159	.37724	.02126	.11977	.20341	7.602	314	.000

To prove the finding above, first the statistical hypothesis was done as follows:

$$H_0 = \bar{X} \text{ instrumental} < \bar{X} \text{ integrative}$$

$$H_1 = \bar{X} \text{ instrumental} > \bar{X} \text{ integrative}$$

As you can see in Table 5, the significant value was .000 (one tailed, .000/2), which was lower than the p value (0.05). According to this, the second hypothesis i.e. H1 was accepted. This finding indicated that the mean score of instrumental motivation is higher than that of integrative motivation at 0.05 level ($p < .05$, $t = 7.602$). Hence, the result shown by the t - test and mean and standard deviation are the same. So, it could be simply concluded that the students were instrumentally motivated to study English as a foreign language at KMUTNB.

Moreover, the findings also revealed that the average mean scores of instrumental and integrative motivation were 4.39 and 4.23 respectively which fall under the category of very high level of motivation. These findings correspond with the study done by Kitjaroonchai & Kitjaroonchai (2012) on motivation toward English language learning of Thai students who majored in English. Their study finding revealed that both integrative and instrumental motivation had close to equal level however, instrumental motivation outperformed at a slightly higher level of 0.38. The study done by

Liu (2007) on Chinese students motivation to learn English at a tertiary level showed that instrumental motivation was slightly greater than integrative motivation, similar to the finding of the present study. Likewise, one of the comparative studies in Thailand and Cambodia to investigate English learning motivation among Thai and Cambodian students revealed that students are mainly instrumentally motivated (Narumon, 2013). Contradicting to these results, another study conducted at an English Medium University in Thailand revealed that students majoring in Business English are integratively motivated to learn English (Degang, 2010). However, gender distinctions are not included in this study and the result thus obtained may be due to the competitive environment an English medium university has.

It is important to see which items received the highest and the lowest mean scores to identify which factors basically motivate students and which aren't that important in English language learners' lives. In line with this, in this study, two items having the highest and lowest means scores were chosen to see their significance in Thai students to study English as a foreign language. In Table 2, it can be seen that the item 1 'Studying English is important because I will need it for my future career' (mean=4.83, SD=.53) and item 3 'Studying English is important because it will be useful in getting a good job with a handsome salary' (mean=4.61, SD=.71) received the highest mean scores whereas item 9 'Studying English is important because other people will respect me more if I know English' (mean=3.70, SD=.1.04) and item 18 in Table 3 'Studying English enables me to better understand and appreciate the English art and literature' (mean=3.90, SD =.95) had the lowest mean scores. Hence, it can be inferred that bachelor level EFL students of science and technology fields were motivated to study English because of its future prospect. They considered English as an important

language for their career and getting a good job in the future. For these students, understanding and appreciating the English art and literature and getting respect after having English language proficiency do not really matter in their lives. Since, both the items with the highest mean scores show instrumental motivation, it can be simply assumed that students were instrumentally motivated to learn English as a foreign language.

Thailand has entered in the ASEAN Economic Community (AEC) 2015, which uses English as the language of communication. It also opens a plethora of opportunities for Thai people in Thailand and in other member countries. Therefore, it can be concluded that Thai students are concerned about their future careers and they consider English language skill as an important tool to get jobs in the future. Similarly, the items with the lowest mean scores signified that students don't really want to be respected just because they have good English and they don't really see the importance of English language art and literature in their lives. As Thai students have very high level of motivation to learn English for their future prospects, the university should find ways to overcome any challenges they may face. As this research revealed that EFL students have higher level of motivation to learn English, overcoming any challenges will certainly help them perform better in class and in their lives as well. Furthermore, to analyze the data collected for the second research question on gender difference in motivational orientation of students, the mean and standard deviation were separately analyzed for each item according to gender. For data interpretation, the same criteria were set as in Table 1. In Table 6 and Table 7, the data were interpreted on the basis of mean and standard deviation for male and female students respectively. In Table 6, the total number of male students were 160 i.e. N= 160.

Table 6 Mean and Standard Deviation of male students (N=160)

Items	Statements about motivation	Mean	SD	Mean	SD
1	Studying English is important because I will need it for my future career.	4.78	.621	4.90	.41977
2	Studying English is important because it will make me more knowledgeable and smart person.	4.36	.76	4.52	.64
3	Studying English is important because it will be useful in getting a good job with a handsome salary.	4.53	.78	4.69	.62
4	Studying English is important for my overseas trips.	4.49	.79	4.60	.74
5	Studying English is important to get the utmost benefits from ASEAN Community 2015	4.45	.77	4.62	.68
6	Studying English will help me to do class assignments and exams.	4.16	.85	4.21	.76
7	Studying English will enable me to search and access more literature resources and reading materials.	4.33	.78	4.48	.75
8	Studying English can lead to more success and achievements in life.	4.21	.85	4.40	.79
9	Studying English is important because other people will respect me more if I know English.	3.74	1.06	3.66	1.02
10	My parents feel that it is very important for me to learn English.	4.31	.88	4.43	.81
11	Studying English is important because it will allow me to be more at ease with people who speak English.	4.46	.75	4.59	.68
12	Studying English is important because it will allow me to meet and converse with more and varied groups of people.	4.51	.75	4.63	.63
13	Studying English enables me to better understand the ways in which native speakers live their life.	4.03	.91	4.27	.81
14	Studying English enables me to share my ideas and understanding, discuss in different topics with people from other countries.	4.17	.85	4.37	.74
15	Studying English enables me participate confidently in social, academic and professional activities among other cultural groups.	4.23	.82	4.46	.75
16	Studying English enables me to learn about the culture and social life of English - speaking people.	4.07	.91	4.31	.75

Table 6 (Continued)

Items	Statements about motivation	Mean	SD	Mean	SD
17	Studying English helps me make many friends from different parts of the world.	4.19	.88	4.34	.82
18	Studying English enables me to better understand and appreciate the English art and literature.	3.76	.99	4.05	.89
19	Studying English enables me to have proper accent alike native English speakers.	3.94	.96	4.17	.90
20	Studying English enables me to behave like a native English people with an open mind and confidence.	3.99	.95	4.10	.91

Hence from Table 6, it could be implied that male students had very high level of motivation for items 1, 2, 3, 4, 5, 7, 8, 10, 11, 12 and 15 and for the rest of the statements out of 20 items, they had high level of motivation. Again, the first statement has the highest mean that implied male students were instrumentally motivated to learn English language. Similarly, for female students, the mean and SD were analyzed for each item as shown in Table 7. The total number of female students was 155 i.e. N=155.

According to the analysis, female students were very highly motivated to the items 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16 and 17 and highly motivated to items 9, 18, 19 and 20. Even for female students, the first statement received the highest mean score that implied they were also instrumentally motivated to learn English language.

Hence, from the analyses, it can be concluded that both male and females had very high level of motivation for items 1, 2, 3, 4, 5, 7, 8, 10, 11, 12 and 15. Moreover, for both male (mean = 4.78, SD. = .621) and female students (mean = 4.90, SD. .41977), the first item i.e. ‘Studying English is important because I will need it for my future career’, had the highest mean scores, which implied that both gender see the significance of English language for their career prospect and are instrumentally motivated to learn English. However, the result also showed that the level of instrumental motivation is slightly higher (0.16) in female students than male students. Moreover, in order to identify the type of motivational orientation each gender had, mean scores and standard deviation of each motivation according to the gender were calculated in Table 8.

Table 7 Mean and Standard Deviation of Instrumental and Integrative motivation

Motivation	Gender	N	Mean	SD	Interpretation
Instrumental	Male	160	4.33	.59	Strongly agree
Instrumental	Female	155	4.45	.49	Strongly agree
Integrative	Male	160	4.14	.63	Agree
Integrative	Female	155	4.33	.61	Strongly agree

As shown in Table 8, both male and female students had very high level of instrumental motivation whereas for integrative motivation, female students had very high level of motivation while male had high level only. Moreover, the Table 8 also showed that female students had higher mean scores than male students for both instrumental and integrative motivation. Hence, the finding revealed that females have greater motivation than males in terms of both types of

orientations. Moreover, as the mean scores of instrumental motivation were higher in both males and females, it can also be concluded that Thai students are mostly instrumentally motivated. Though the levels were fairly close, instrumental motivation seemed prominent in both male and female students. Finally, in order to check the difference in the mean scores, the Analysis of Variance (ANOVA) was employed as shown in Table 9.

Table 8 Test of between Subject - effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8.064a	3	2.688	7.951	.000
Intercept	11708.342	1	11708.342	34631.781	.000
Gender	3.720	1	3.720	11.003	.001
Motivation	4.080	1	4.080	12.069	.001
Gender* Motivation	.232	1	.232	.687	.408
Error	211.639	626	.338		
Total	11924.370	630			
Corrected Total	219.703	629			

a. R Squared = .037 (Adjusted R Squared = .032)

In order to check if there is a difference between male and female students mean scores and the mean scores of instrumental and integrative motivation, two hypotheses were proposed as shown below:

First Hypothesis: The male and the female students' mean scores are different.

$$H_0 = \bar{X}_{\text{male}} = \bar{X}_{\text{female}}$$

$$H_1 = \bar{X}_{\text{male}} \neq \bar{X}_{\text{female}}$$

In terms of gender, it showed that the significant value was .001 (two tailed, .001) that was lower than the p value (0.05). On the basis of this result, H1 was accepted. This finding indicated that the mean scores of the male and female students

are significantly different at 0.05 level ($p < .05$, $F = 11.003$).

Second Hypothesis: The mean scores of the instrumental and integrative motivations are different.

$$H_0 = \bar{X}_{\text{instrumental}} = \bar{X}_{\text{integrative}}$$

$$H_1 = \bar{X}_{\text{instrumental}} \neq \bar{X}_{\text{integrative}}$$

In terms of gender, it showed that the significant value is .001 (two tailed, .001) which was lower than the p value (0.05). According to this, H1 was accepted. This finding indicated that the mean scores of the two types of motivation are significantly different at 0.05 level ($p < .05$, $F = 12.069$).

Table 10 Demotivating factors

Areas of language difficulties	Male	Female
Listening	2	3
Speaking	2	1
Grammar	1	1
Total	5	5

Some of the responses of the students on why they don't like to study English are mentioned here. One of the female students commented 'I think my problem is listening. I don't understand my teachers but I feel shy to ask questions'.

Another female student stated 'I like to study English but I don't understand my teachers and other foreigners when they speak fast. I am shy'.

One female students said 'I don't like grammar. I hate it'.

The responses of male students indicated that they also feel the same way as women do. One of the male students explained 'For me the reason I hate English is I don't understand my teachers in the classrooms sometimes and I don't ask questions'.

Another male student stated 'I hate grammar so much. In Thailand, grammar is very important but I don't like it'.

One male student quoted 'I don't like English sometimes when I don't understand it'.

There responses are summarized as follows:

- Students don't understand their teachers and hesitate to ask questions. (5 out of 10 students)
- Students are shy to speak English, as they are afraid of making mistakes. (3 out of 10 students)
- Grammar is the most difficult part to learn. (2 out of 10 students)

These aforementioned factors show that listening is the most difficult problem that students face in their English classes and outside world. Thus, validating the study of Kitjaroonchai & Kitjaroonchai

(2012) that suggested listening as the most difficult problem encountered by the students in acquiring English language skills, this study emphasized the same result. Therefore, an important factor to consider is the way teachers speak in the classroom. Some teachers speak very fast which at times could be difficult for students to understand, especially when students' English level isn't high Teacher accent could also create an additional challenge. These barriers need to be addressed in order keep the language learning motivation of students intact. As students are highly motivated to learn English, teachers should keep in mind before going to class that Thai students are usually shy to ask questions. Teacher should take care to explain well and ensure that students are comfortable, able to engage, and understanding well.

Another problem students encounter is speaking. It has been already mentioned above, Thai students are shy to speak English, as they are concerned about their grammatical errors. Thus, classroom activities need to be adjusted to have more time for each student to speak. Sometimes, big classes can be the reason behind this issue as teachers can't focus on each student and all students don't get an opportunity to speak out in the class. As shy students usually remain silent in the classroom, they may remain unnoticed to the teachers if the classroom sizes are big.

Another problem that student stated was grammar thus teachers need to have some techniques to simplify its use. Use of conventional

teaching methods i.e. using formula to teach grammar or teaching the rules too fast and not giving enough time to practice could be the reasons behind it. Thus, teachers need to come up with ways that fit their classes best. They need to adapt the lessons considering the English level and needs of their students.

Demotivating factors need to be addressed properly. This will allow students to learn English well as they know the importance of English in their lives and are already motivated to learn English language. Some suggestions are given in the recommendation section.

6. Conclusion

The present study was conducted to identify the type of motivation held by EFL students currently enrolled in the science and technology field at KMUTNB, and how their gender affects the type of motivation they have. It also attempted to identify the demotivating factors that hinder students' motivation to study English as a foreign language. This study concluded that EFL students in the field of science and technology at KMUTNB are highly motivated to study English while their level of instrumental motivation is slightly higher than integrative motivation. In terms of gender, this study revealed that female students have greater motivation than males regarding both types of motivational orientations i.e. they have very high level of instrumental and integrative motivation. Male students had high levels of instrumental orientation but the level of integrative motivation they expressed was high only. However, the overall result of the study concluded that there wasn't a significant difference between male and female students when it comes to motivation. It can be simply assumed from the results obtained that both male and female students see the significance of English for their future career and also to help them get the type of job they prefer with a handsome salary. There might be a perception that opportunities

are related to proficiency in languages, specifically in relation to the field of science and technology, not only in Thailand but also in other ASEAN countries. As English is the means of communication in ASEAN, it can be assumed that Thai students are concerned about losing opportunities if they don't have good English skills. As students have very high level of motivation to study English, the difficulties students' face while learning English must be addressed. If these issues remain untouched, the levels of motivation students have might be negatively affected or might decline over time.

7. Recommendations

This study investigated the type of motivation and gender differences on those types of motivation in students studying science and technology at KMUTNB; hence, results cannot be generalized for other backgrounds of students in different contexts. As motivation is a multifaceted phenomenon, it can show different results in different contexts. Thus, generalization of such result shouldn't be made. Therefore, further investigation is needed among other backgrounds of students concerning the impact of gender on their motivational orientation. The findings of the present study showed that both male and female students have higher level of instrumental motivation that could be beneficial for the university and its faculty members to implement some programs and activities for the students to enhance their English language skills. Moreover, males have lower integrative motivation than females. Therefore, some cultural exchange programs would be beneficial for these students to encourage them to learn different cultures while at the same time developing their language skills.

It would also be beneficial to integrate activities that provide fun and interactive opportunities for language learning. The Faculty of Applied Arts at KMUTNB organizes an English Fun Fair annually to help students practice their English language skills through different types of

competitions such as speech contest, spelling bee, word guessing games and singing contests etc. Through this event, students are able to show their creativity while at the same time they practice their English skills. Fun and engaging learning activities will not only enable students to increase proficiency in English, but also support students to practice and gain confidence in their speaking abilities. Students seem motivated to participate in such programs, as they strive to gain rewards or prizes for each competition. Having found the motivation of students instrumental, these types of activities or programs should be encouraged and held on a frequent basis, if possible 2 or 3 times in a year. These activities help students practice their listening and speaking skills in a fun way, eliminating identified barriers to language learning which are found to be major demotivating factors for them.

This study revealed listening, speaking and grammar as major demotivating factors for students. English teachers at the Faculty of Applied Arts at KMUTNB need to make an extra effort to develop and implement constructive teaching pedagogies that help sustain students' language learning motivation. As demonstrated by the many studies and research outlined in the literature review, motivation enhances student performance and thus leads to higher achievement. It is therefore imperative to sustain and increase the instrumental and integrative motivation possessed by students. However, it is important to mention that the open-ended questionnaire for this study included only 10 respondents; it is recommended that future studies should have a larger sample size to ensure reliability and validity of results. It is also imperative to keep in mind that different factors may affect motivation in different contexts; hence future studies should be cognizant of the local, contextualized factors that can affect differing results.

Though this study was focused on students from a science and technology field, it is believed that the results give a relative representation and would be beneficial for future researchers, English teachers at KMUTNB and other authorities interested in designing efficient strategies and programs for both male and female students to stimulate their language learning motivation and ultimately help them to achieve their desired goals in life. The results of this study show that students are highly motivated to learn English; therefore, proper teaching techniques and learning environments will help them to perform better in class and in their lives.

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