Causal Attributions of English Learning Success of Thai Students in an International University

*Sureepong Phothongsunan**

Abstract

This research looks into attributional causes of success in learning English reported by 329 Thai university students in an international program. The participants also made an evaluation of themselves in respect of whether they think they were successful EFL learners thus far as well as for undertaking future tasks. With the survey questionnaire and the follow-up interview, the findings reveal that teachers, effort, and class atmosphere influenced their learning success more than other factors. There is a significant difference between students who think of themselves as 'successful' and those perceiving themselves as 'unsuccessful' in terms of effort and strategy in learning English. Implications from the study are directed to 1) creating positive learning relationships between teachers and students; 2) instilling in students the necessity of effort in learning English and 3) developing relaxed and friendly class atmosphere that enhances and supports language learning.

Keywords: *Attribution Theory, Self-evaluation, Learning Success, EFL (English as a Foreign Language)*

* Assistant Professor, Faculty of Arts, Assumption University
592 Ramkhamhaeng 24, Hua Mak, Bangkok 10240, THAILAND.
E-mail: sureepongpht@au.edu

ปัจจัยที่เป็นสาเหตุของความสำเร็จในการเรียนภาษาอังกฤษของนักศึกษาชาวไทยในมหาวิทยาลัยนานาชาติ

*สุรีย์พงศ์ โพธิ์ทองสุนันท์**

บทคัดย่อ

บทความวิจัยนี้ศึกษาปัจจัยที่เป็นสาเหตุของความสำเร็จในการเรียนภาษาอังกฤษของนักศึกษามหาวิทยาลัยชาวไทยซึ่งศึกษาในหลักสูตรนานาชาติจำนวน 329 คน กลุ่มตัวอย่างยังได้ประเมินตนเองด้วยว่าพวกเขาคิดว่าเป็นผู้เรียนภาษาอังกฤษเป็นภาษาต่างประเทศที่ประสบความสำเร็จหรือไม่ ณ ปัจจุบัน รวมถึงการประเมินความสำเร็จของตนเองในการเรียนภาษาอังกฤษในอนาคต โดยมีวิธีการใช้แบบสอบถามเชิงสำรวจและการสัมภาษณ์ติดตามผล การศึกษาวิจัยนี้ พบว่า ครูผู้สอน ความพยายาม และบรรยากาศในห้องเรียนเป็นปัจจัยที่สำคัญต่อความสำเร็จในการเรียนภาษาอังกฤษมากกว่าปัจจัยอื่น ๆ นอกจากนี้ ยังพบความแตกต่างที่มีนัยสำคัญระหว่างกลุ่มที่คิดว่าตนเองเป็นผู้เรียนที่ประสบความสำเร็จและกลุ่มที่คิดว่าตนเองเป็นผู้เรียนที่ไม่ประสบความสำเร็จในด้านความพยายามและยุทธวิธีในการเรียนภาษาอังกฤษ ผลการศึกษานี้จะมีประโยชน์ในเรื่อง 1) การสร้างความสัมพันธ์ในการเรียนรู้เชิงบวกระหว่างครูผู้สอนและผู้เรียน 2) การค่อย ๆ สอนให้ผู้เรียนซึมซับถึงความจำเป็นของความพยายามในการเรียนรู้ภาษาอังกฤษ และ 3) การสร้างบรรยากาศในห้องเรียนที่ผ่อนคลายและเป็นมิตรที่ส่งเสริมและสนับสนุนในการเรียนภาษา

คำสำคัญ: *ทฤษฎีปัจจัยที่เป็นสาเหตุ การประเมินตนเอง ความสำเร็จในการเรียน ภาษาอังกฤษเป็นภาษาต่างประเทศ*

* ผู้ช่วยศาสตราจารย์ คณะศิลปศาสตร์ มหาวิทยาลัยอัสสัมชัญ
592 ซอยรามคำแหง 24 หัวหมาก กรุงเทพมหานคร 10240
เมล: sureepongpht@au.edu

Introduction

In the age of globalization, English plays a very important role as a language for international communication or a lingua franca. While the demand for English is high with its greater role in Thai society, however, the standard of English teaching and learning at Thai schools and universities has been widely criticized. Wiriyachitra (2002) and Ministry of Education reports (1999a, 1999b cited in Wongsothorn et al., 2003) found unsatisfactory outcomes when assessing student achievement in English at years 6, 9, and 12. Besides, in the most recent Education First English Proficiency Index (EF English proficiency Index, 2012) released in October 2012, Thailand came 53rd, the world's second-lowest rank with an average score of 43.36, labeled as 'very low proficiency' in English use.

When the English-proficiency test results within Thailand were analyzed, the O-NET (Ordinary National Educational Test) revealed that the English average scores of Thai primary school students in 2010 and 2011 were, out of 100, 31.75, and 20.99 respectively. The average scores between 2009 and 2011 of 900,000 lower secondary school students were 32.42, 26.05, and 16.19 correspondingly. Among 350,000 upper secondary school students, the English language average scores (2009-2011) were 30.68, 23.98, and 19.22 (O-NET reports, 2012). Results of these English tests have reflected Thai students' insufficient English skills and the poor results would seriously affect the country's competitiveness in the regional as well as global market (O-NET reports, ibid.).

In Thai tertiary English education, researchers on the topics of needs and wants of English in workplaces have suggested that the English curriculum in Thai universities cannot meet the demands for English used in the workplace. The skills used most at this level are listening and speaking which are not the focus skills in the Thai tertiary education English curriculum (Wiriyachitra, 2002). This has critically led to an assumption that there is a great contradiction between the demands for English proficiency in today's globalized world and the actual, acceptable level of Thai students and graduates' English competence (Khaopa, 2012). Even it is reported that Thai students and graduates of international programs where English is used a as a medium of instruction are still unable to perform satisfactorily in English

despite the fact that all courses and work related are conducted in English (Barnes, 2008; The Economist Intelligence Unit, 2012). Thus, consideration should also be given to find out why a majority of Thai students and graduates have difficulty in acquiring English proficiency, regardless of engaging in an English–medium education system.

This way, it can be argued that the English teaching and learning methods in Thai schools and universities may not achieve their goals as a number of Thai students still have unsatisfactory levels of English language ability, be it in academic or professional contexts. There are various factors such as educational administrators' vision and policy, learners' commitment and motivation, teachers' teaching styles and methodology involved in successful language learning, to name some. However, it is interesting to note that the Office of National Education Standards and Quality Assessment (ONESQA) in Thailand, based on its quality checks, reported that less than 50 percent of all Thai educational institutes nationwide provided sufficient instruction with a student-centered approach, including arranging activities to promote creativity and analytical and problem-solving skills. Therefore, a national educational goal has been set to bring about significant changes with the first priorities being developing students' analytical abilities and life-long learning as well as improving teachers' abilities (www.nationmultimedia.com, 2005).

Given all these, in support of the power of learners' beliefs, this study aimed to investigate Thai university students' affective aspects regarding perceived causes of success in learning English as well as their self-evaluation on whether they think they are successful or unsuccessful EFL learners. According to Dörnyei (2001), what students believe, and how they interpret past behaviors and actions may be reasonably assumed to have an effect on their current and future actions. In fact, scholars and educators in the area of English language teaching tend to question why some students are more successful than others. From this point of view, it is therefore important to acknowledge EFL students' perceived causes of success as it can after all eliminate some potential factors encumbering their learning.

Literature Review

Speculation and prediction of academic behavior has grasped the attention of various modern psychological researchers. A large number of theories have

therefore been formulated and empirical studies have been undertaken in response. Among these, attribution theory has played an important role in a number of studies in the areas of education and foreign language learning and teaching.

Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behavior. Attribution theory assumes that people try to determine why people do what they do. A person seeking to understand why another person did something may attribute one or more causes to that behavior. It is no surprise that attribution can be studied in relation to language learning (Dörnyei, 2001). In the area of second/foreign language learning, attribution has been dealt with by numerous researchers (e.g. Peacock, 2010; Taskiran, 2010: Williams & Burden, 1997; Gao, 2008, Gobel & Mori, 2007; Tsi, 2000). Most of these studies have tried to specify second/foreign language learners' attributions and the effect of perceived attributions on learners' language learning outcomes.

A three-stage process characterizes attribution. Weiner (1986) described the attributions or explanations people under study give for their success or failure along the three causal dimensions of locus, stability, and control. Whether people perceived their successes or failures as internal or external, stable or unstable, controllable or uncontrollable is important (Weiner, 1992). These three dimensions are used autonomously with the four main factors of ability, effort, luck, and task ease or difficulty (e.g. Bruning et al., 1999; Dörnyei & Murphey, 2003; Hsieh & Schallert, 2008). Locus refers to the location, internal or external, of the perceived cause of a success or failure. Ability is perceived as internal while luck is external. Stability refers to how much a given reason for success or failure could be expected to change, i.e., whether a cause is stable (fixed) or unstable (variable) over time. Ability is seen as stable (fixed) while effort is unstable (variable). Control indicates how much control the individual has over a cause. It distinguishes causes one can control, such as skill/efficacy, from causes one cannot control, such as aptitude, mood, others' actions and luck.

Vispoel and Austin (1995) further explain their dimensional classification scheme as having eight causal attribution based on Weiner (1979) with strategy, interest, teacher influence and family influence being added. Within their scheme,

locus of ability, effort, strategy, and interest are internal, and among them only ability is stable and uncontrollable, but the rest are unstable and controllable Task difficulty, luck, family influence and teacher influence are external and uncontrollable, and luck is unstable but three others are stable.

Table 1 shows how the attributions of ability, effort, luck and task altogether with additional perceived attributions of strategy, interest, teacher influence, and family influence can be integrated in terms of the dimensions of locus, stability and control.

Table 1: Dimensional Classification Scheme for Causal Attributions

Attribution	Dimension		
	Locus	**Stability**	**Controllability**
Ability	Internal	Stable	Uncontrollable
Effort	Internal	Unstable	Controllable
Luck	External	Unstable	Uncontrollable
Task Difficulty	External	Stable	Uncontrollable
Strategy*	Internal	Unstable	Controllable
Interest*	Internal	Unstable	Controllable
Teacher Influence*	External	Stable	Uncontrollable
Family Influence*	External	Stable	Uncontrollable

* Indicating additional attributions given based on Vispoel and Austin (1995)

Source: Adapted from Vispoel and Austin (1995), based on Weiner (1979)

In the present study, as there are peer work and group work inside and outside the classroom for specific language courses the learners experienced as observed in their learning context, classmates' influence may affect their subjective attributions and therefore is included as another causal attribution. This extra factor, so called 'peer influence', would be regarded as the ninth factor in addition to the eight factors Vispoel and Austin (ibid.) explained as displayed in Table 1.

Research has shown that attributions of causality differ depending on the person, the task, the culture and the social group (Graham, 1991). Variations in attributions have been reported for gender (Nelson & Cooper, 1997; Pintrich &

Schunk, 2002), with women being seen as more likely than men to attribute success to something other than themselves (Fox & Fern, 1992). In addition, Hispanic women are more likely to attribute job performance to something other than personal ability than are non-Hispanic women (Romero & Garza, 1986).

Variations in attributions have also been reported for self-esteem (Betancourt & Weiner, 1982; Skaalvik, 1994), perceived intelligence (Swami & Furnham, 2010), performance (Carr & Borkowski, 1989), and for social position with members of minority ethnic groups being more likely to believe that success and failure result from social position or luck (Kudrna et al., 2010).

Attribution Theory and Language Learning

Even though attribution theory is important in educational contexts, there have not been many studies on the theoretical significance of attribution in the area of foreign/second language learning. In Horwitz's (1988) study, learning a foreign language was perceived to be a difficult task by students whose assumptions about who could succeed at it affected their expectations of success and their motivation. It is also associated with risking embarrassment and losing face (Horwitz, 1990).

Some studies have shown that attributions for language learning may be very different from those of other areas of learning where attributions of success are often perceived as internal while attributions for failure are seen as external. For example, British primary school children attributed success to external factors, in particular, teacher influence (Williams & Burden, 1999) and Tsi's (2000) American undergraduate and graduate foreign language students attributed their success in foreign language learning to several external factors, for example, their teachers, the classroom environment, family and community assistance, though in mixed-level classes, one external factor was cited as an attribution for failure.

However, there are studies in which success was attributed to internal factors (Graham, 1991; Williams et al., 2001). In the latter study, two internal factors, practice and a positive attitude, and one external factor, support from family were cited as attributions for success. It is also noted that the respondents, who were

students learning English in Bahrain, attributed failure to mainly external attributions, for example, teaching methods, lack of support from family and teachers, poor comprehension and negative attitude. Williams et al. (2004) found that the majority of attributions for both success and failure in their study were internal and that the variables of gender, year group and language studied showed clear differences in attribution for success and failure. Ushioda (2001) found that respondents who were university French learners attributed success to internal locus while attributions for failure were external. In contrast, Gobel and Mori (2007) discovered that first-year Japanese undergraduates in speaking and reading classes attributed success to teachers and the classroom environment while attributing failure to internal factors of lack of ability and lack of effort. This is a possible reflection of culture on attributions of success and failure. Similar findings were found in subsequent studies by Gobel et al. (2011) when they compared Thai, Japanese and Malaysian undergraduates, and by Thang et al. (2011) when they compared the undergraduates in six Malaysian universities. However, Mori et al. (2011) found that high proficiency Malaysian undergraduates and those who perceived themselves as such were more similar to students in western contexts as they attributed success to their own effort and ability and failure to class and interest-related factors such as class atmosphere and interest in the task. In a study carried out in Pakistan (Adiba, 2004), high achievers attributed their success and failures to their ability and effort and low achievers attributed their success and failures to task difficulty and lack of ability or luck.

In accordance with existing literature, there appears little evidence on the study of attribution on language learning in the Thai context and especially in the international program of the university setting. In its application to second/foreign language, attribution theory has recently become the focus of language researchers as it can be used to explore an area to reach a better understanding of language learners (Williams & Burden, 1997). Such area can include perceived factors contributing to success or failure in second/foreign language learning. Moreover, attribution theory can be further applied to explain the difference in motivation between high and low second/foreign language learning achievers. According to this theory, high achievers will approach rather than avoid tasks related to success, for they believe success is due to high ability and effort. Failure is thought to be caused by bad luck or a poor

testing material and is not their fault. Thus, failure doesn't affect their self-esteem but success builds pride and confidence. On the other hand, low achievers would avoid success-related tasks because they tend to doubt their ability and/or assume success is related to luck or to other factors beyond their control.

It would seem that investigating the attributional beliefs of second/foreign language learners will yield various benefits. Firstly, attributions which people make are likely to influence their subsequent performance (Weiner, 1992). Secondly, they can in all likelihood manipulate people's motivation to tackle future tasks. As a minimum, it is certain that the attributions of success in learning English held by the participants in this study can help better understand other Thai university students learning in different contexts as well as the challenges that they face in the process of English language learning. In view of that, a study that undertakes these aspects of research is timely and therefore becomes the focus of this research study.

Overall, this study deals with learners' subjective importance they place on attribution for self-evaluation in order to see which dimensions of causality they attribute their success to. As conceivable causes are infinite, underlying properties of the causes therefore need to be identified. It is important to assess learners' self-evaluation because test results and final grades are completed by teachers and cannot be controlled by learners directly. Also, whether the participants' subjective attributional causes have any influence on achievement motive for their future learning will be analyzed as well.

Research Methodology

This mixed research methods study aims to gain an understanding of Thai university students on their attributions of success in English language learning. The proposed research questions are:

1. What are Thai university students' attributions of success in learning English?
2. To what extent are these attributions different between groups of learners who evaluate themselves as successful and unsuccessful?

This study lies evidently within theoretical framework of social constructivism as individuals' perceptions are culturally and socially formed. Even with respect to

the same phenomenon, individuals may or may not have different perceptions of what a particular situation means to them.

To gain sufficient and manageable data, the sample size was determined according to the sample size calculation formula by Yamane (1967). The population size was 2,535 encompassing Thai students in the Business English Department from the School of Arts at a private university in Thailand. Therefore, this resulted in a sample size of 329 from the total population. 255 participants were female and 74 were male. The sample represented students from all academic years from the first to the fourth year of study including those having studied for more than 4 years.

This study obtained data through two methods: a survey questionnaire and a semi-structured interview. A combination of methods was employed for collecting both quantitative and qualitative data with several purposes: to provide more valid data, reduce errors or unreliable data, and obtain more insights into the issue under investigation. This way, the researcher could triangulate findings, demonstrate convergence in results, use one method to inform another, discover contradictions, and extend the breadth of inquiry. Many researchers have tried to use both quantitative and qualitative methods in their studies whenever appropriate (Ernest, 1994) to strengthen and supplement their research data. Patton (2001) advocates the use of triangulation by stating "triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, including using both quantitative and qualitative approaches" (p. 247).

The use of triangulation in this study was also taken to involve a few investigators: the researcher and his research assistant and peer researchers' interpretation of the data during the data analysis process to ensure data accuracy and impartiality. Also, at the stage of face and content validity check, the IOC (Index of Item Objective Congruence) was used where 3 expert researchers in the field of English and Applied Linguistics were asked to examine the questionnaire items and interview questions thoroughly. The questionnaire statements were validated to evaluate the relationship with the nine constructs of attributional factors and the content validity was found at 0.92 while the main interview questions obtained the overall of 0.85 for the IOC. Based on Fraenkel and Wallen (2000), confidence of

content validity should be more than 0.80; therefore, both methods are considered acceptable. As Johnson (1997) points out that a researcher can use investigator triangulation and consider the ideas and explanations generated by additional experienced researchers.

The quality of the survey questionnaire used was ensured by having it piloted with 30 Thai university students whose characteristics were in commonalities with the target participants. The results from the pilot testing suggested that the participants had no problems understanding the questions asked in the questionnaire nor did they have any difficulties in expressing attitudes towards the statements in the questionnaire.

In order to obtain the reliability of the questionnaire, the data collected from the pilot study was analyzed using SPSS to find out the reliability coefficient alpha. The analysis showed that the coefficient alpha of part III was 0.89. The score was evidence to the reliability of the instrument as suggested by Nunnally (1994) that the score should be of 0.70 or higher in order to be acceptable.

The survey questionnaire was then administered by the researcher and his assistant. A consent form was appended to invite participants to take part in the study and allow the researcher to use the data obtained for the research. The survey questionnaire consisted of four parts. The first section asked about the participants' background information including age, gender, and overseas experiences. The second part focused on asking whether they think they were successful in learning English up to the present. Their brief explanation as to why they hold such viewpoints about their English learning success was also requested. The third part requested the participants to rate their anticipated learning effect using a 5-point Likert scale on 9 attributional factors. In the last part, the participants then indicated whether they expect to be either successful or unsuccessful in future English learning and succinctly explained why they believe so.

To proceed with data analysis, the participants were divided by their self-evaluation on whether they think they were successful or felt they had failed, not on the basis of their experimental situation, test results and grades or gender. The mean scores were initially eyeball tested and analysed with one-way ANOVA.

Questionnaire data was supplemented and triangulated with the interview data. Indeed, interviews with the students were used as a follow-up to the questionnaire in order to elicit more in-depth data and to investigate other factors that contribute to English learning success and possibly failure as well as self-evaluation. A semi-structured technique was used for the interview, considering that it would allow the students to express their feelings and thoughts and to be focused at the same time. To ensure the validity and reliability of the interview, interpretive validity and interrrater reliability were undertaken. Interpretive validity is to obtain participant feedback or member checking, including discussing the findings with the participants to ascertain that the interpretations are not based on the researcher's perspective but that of the participants (Maxwell, 1992). This was carried out when the interview results were analyzed and interpreted. Discussions about the findings were made between the researcher and his assistant and seven participants who were interviewees. The main findings were pointed out and clarified during this discussion period. Then, it was found that all seven participants opined that the data interpretation by the researcher was reflective of their true perceptions of their self-evaluation, expectation for future English Learning and attributions for success in learning English.

The interview responses from 25 interviewees were content-analyzed using the interpretive analysis methods of topic ordering and constructing categories (Radnor, 2002). Looking for connections across topics, major categories, and subcategories helped gain the whole picture of the issue under investigation. To ensure reliability, interrater reliability was used. The researcher, after summarizing, categorizing, and interpreting the interview data into groupings, requested a language expert in EFL to verify if the expert's judgment or measurement on the students' coded data substantiated the researchers' interpretation. There was a form given to the expert to tick and complete this. The degree of interrater reliability according to Stemler and Tsai (2008) can be presented either as a reliability coefficient or as a simple percentage of agreement between the two data sets. This study thus adopted the percentage of agreement and the degree of interrater reliability was found to be at 100 percent as the researcher and the expert discussed any disputed groupings and coding until a consensus was reached.

Results

Concerning the findings of the study, the survey questionnaire and the interview are used in an attempt to answer two research questions: 1) What are Thai university students' attributions of success in learning English? and 2) To what extent are these attributions different between groups of learners who evaluate themselves as successful and unsuccessful?

Quantitatively, to investigate the causal attributions in learning English, the participants were divided into four groups in relation to their responses to the survey. Group 1 (SS) includes the participants who evaluated themselves as successful and expect repeated success for the next English course to be studied. Group 2 (SU) is classified for the participants who believed they were successful, but think that they will not be successful again. Group 3 (US) belongs to those who assessed themselves to be unsuccessful but expect to be successful in the next English learning. The participants who perceived themselves as failures and think that they will continue to fail in their English learning are categorized as Group 4 (UU). The self-evaluation results, grouping classified by their expectation for future English learning, and mean scores and standard deviations for distributions based on nine casual attributions were all analyzed as seen in Table 2.

Self-evaluation

For self-evaluation, out of 329 participants, 238 believed that they were successful EFL learners while 91 felt the opposite. 194 participants were classified as Group 1 while Group 2 contained 44 participants. Group 3 and Group 4 have 59 and 32 participants accordingly.

Standards setting for mean scores was determined to make cut points. This suggests that the mean score more than 3.50 means that the participants consented to a particular item; that is to say, they attributed their success to the specific dimension of causality. Likewise, the score below 3.50 would be interpreted as insignificant or not attributional in this present study.

Table 2: Self-evaluation, Expectation for Future English Learning and Attributions for Success

Self-evaluation	Successful (n = 238)				Unsuccessful (n = 91)				TOTAL (n = 329)	
Expectation for Future English Learning	Group 1 (SS): Successful (n = 194)		Group 2 (SU): Unsuccessful (n = 44)		Group 3 (US): Successful (n = 59)		Group 4 (UU): Unsuccessful (n = 32)			
Success Attributions	Mean	SD	Mean	SD	Mean	SD	Mean	SD	**Mean**	**SD**
1. Ability	3.62	0.89	3.35	1.03	3.21	0.98	2.96	0.94	**3.31**	**0.91**
2. Effort	4.08	0.92	3.93	1.01	3.98	0.85	2.99	1.06	**3.54**	**1.01**
3. Luck	3.53	0.82	3.21	0.88	3.14	0.92	3.08	1.03	**3.19**	**1.09**
4. Task Difficulty	3.37	0.95	2.98	0.82	3.25	0.87	3.02	1.03	**3.16**	**0.82**
5. Strategy	3.72	0.88	3.65	0.99	3.69	0.87	2.92	0.90	**3.52**	**0.93**
6. Interest	3.68	1.01	3.32	1.09	3.62	1.05	3.22	0.82	**3.47**	**0.88**
7. Teacher Influence	4.22	0.88	4.08	0.82	3.89	1.02	3.94	1.09	**4.05**	**0.86**
8. Family Influence	3.52	0.93	3.42	0.92	3.42	0.92	3.35	1.07	**3.38**	**0.91**
9. Peer Influence	4.10	0.79	3.88	0.97	3.37	0.99	3.29	0.86	**3.42**	**0.84**

Attributions for Success and Expectation for Future English Learning

The findings reveal that the participants in general believe that their teachers have a strong influence on their learning regardless of their perceiving themselves as successful or unsuccessful English learners. In fact, 'teacher' is the item receiving the highest mean score of 4.05 among other factors. This indicates that the participants appear to be greatly affected by their teachers than the level of the learning itself or even internal causality including their effort, learning strategy, ability and interest.

The data also show that the participants are likely to think that they will succeed in learning English in the future provided that they put their effort and employ certain strategies to help them learn. It is possible to argue that some of them (n = 59) might perceive that they failed this time but may succeed later if they actually know how to improve themselves strategically.

Task difficulty does not seem to have much connection with the participants' perceived success and failure in learning English as it came last in terms of the overall mean score at 3.16. On the other hand, interest was found to be crucial for

those who think that they will be successful in next learning regardless of their self-evaluation as successes or failures.

In relation to luck, it looks as if they feel that some luck is needed to be successful in learning though this is not a major concern. In addition, they believe that family influence and peer influence play quite an active role in their success in learning English particularly for the successful self-reported group.

Comparing Self-rated Successful and Unsuccessful Groups

Statistically significant differences ($P < 0.05$) were found using one-way ANOVA when comparing those evaluating themselves to be successful with those evaluating themselves to be failures with regards to effort and strategy use. Evidently, the mean scores of the former group are higher than the latter group in effort and strategy as shown in Table 3. This suggests to some extent that making an effort in learning and using appropriate learning strategies can be keys to success in learning English.

In addition, post-hoc tests disclose that the mean scores of the successful group concerning effort and strategy are significantly higher than that of the unsuccessful group regardless of their expectation to be successful or unsuccessful in their future English learning (see Table 4).

Table 3: Univariate ANOVA for Success Attributions on SS, SU, US, and UU Groups and Descriptive Statistics for Univariate ANOVA on SS, SU, US and UU

Factor	Source	*SS*	*Df*	*MS*	*F*	*P*
Effort	SSSUUSUU	17.49	3.50	6.17	9.54	0.00
Strategy	SSSUUSUU	15.12	3.50	5.04	8.89	0.00

($P < 0.05$)

Table 4: Post-hoc Tukey HSD and Scheffé's Test on 'Effort' and 'Strategy'

# Factor	Group (I)	Group (J)	Mean (I-J) Difference	Std. Error	Significance (Tukey HSD)	Significance (Scheffé)
1. Effort	SS	US	0.89	0.24	0.00	0.01
		UU	0.78	0.20	0.03	0.02
2. Effort	SU	UU	1.03	0.15	0.01	0.00
3. Strategy	SS	UU	0.99	0.28	0.02	0.02

($P < 0.05$)

Interview Results

The interviews were conducted mainly in Thai with 25 students who had completed the questionnaires. The interviewees were selected based on the 4 group categorization according to questionnaire responses in order to represent the interview samples. It was found that the most frequent attributional causes for English learning success were teachers, effort, interest, and strategies respectively, mainly in line with the survey results. Their self evaluation as successful or unsuccessful EFL learners did not seem to impinge on their attributions of success in learning English. Interestingly, 19 interviewees referred to class atmosphere as having some impact on their learning English, reasoning that relaxed and supportive class helps them learn better. This is however pertinent to teacher teaching style and methodology. Most commented on the considerable amount of teacher influence on their English learning at university level. Some of them pointed out:

> *"I like a good class environment because it makes me pay attention and feel happy with learning."*
>
> *"Teachers always make me feel like learning or not. If possible, I choose to study with teachers who are caring and understanding. They need to teach well too. If teachers are too strict, the class environment is uncomfortable and boring."*
>
> *"Learning must be fun and useful at the same time. Good teachers are important as we cannot read all from books. They even have some effects on your performance if you understand well what you've learned from them."*
>
> *"I like to study English in an easygoing classroom and the teacher is helpful and friendly. I used to study in a very stressful class and I felt bad and my grade was bad too."*
>
> *"The teacher doesn't need to be perfect in English but the teaching method and style is more important."*

More than half (N = 14) perceived the impression of authority their teachers have as graders or assessors who are able to evaluate the students' actual performance

although teachers' subjectivity, favoritism and personal judgments might affect their evaluating decision as five interviewees interestingly addressed.

> *"Your grades depend a lot on teachers. I know we have to study hard by ourselves but in the end, teachers give you grades which tell you whether you pass or succeed."*
>
> *"I choose to study with some teachers especially those who are not so tough in grading. It makes a difference for me."*
>
> *"Last semester, I think I did so well, but I got only a C. I was surprised. I think the teacher doesn't like me because I am not her favorite."*
>
> *"Before I register, I usually ask my friends and seniors which teachers are ok as some are too hard to talk to and never allow for any makeup for class and work."*

Seven interviewees felt that the influence of English learning success is upon their own learning English. All agreed that they have tried to improve their English skill and prepared well for the exams at the university by relying on their effort and determination. Out of these seven interviewees, three added that they have strategies for learning English and taking tests including talking to oneself in English, speaking and using English as much as possible in daily life, watching only soundtrack movies, fully focusing on English teachers in class to grasp key points and reviewing for exams by making notes in English only.

> *"The best way to learn English well for me is to be confident and determined in myself. It all depends on you more than anything else."*
>
> *"I have strategies to help with learning English. I try to speak it alone and whenever I can."*
>
> *"Preparing for exams is important. I study by paying lots of attention in class and write main outlines in English."*

It was found that peer and family influence on their learning English success was also pointed out by some participants (N = 3) but to a lesser degree. As a few interviewees said:

"There are lots of group assignments, so you need friends to help you finish your work to get good marks. Friends help with tutoring and share study problems with you. Some friends motivate you to study harder or try to compete with you for better grades."

"In general, without good family support, it is hard to be successful in learning not only English but also other subjects. They pay for my tuition and other fees."

Luck was mentioned by two interviewees as having bearing on their success in learning English. However, it was made clear that general luck or right timing rather than specific one was meant. They clarified that some students might be lucky to study with some effective teachers and supportive friends or sometimes exam/test questions happen to be unexpected for the students or are harder than those in previous semesters without reason or explanation.

"You may be lucky or unlucky in your study here. You get good teachers sometimes not so good, friends too."

"Luck can play a role in exams because you might not do well no matter how prepared you are. It is like the teacher hasn't told you to read this part, so you neglected it."

Discussion

The main findings of the current study indicate that the majority of students in this context of learning attributed teachers, effort, strategy and the atmosphere in class for their learning success. Taking into consideration the dimensions of the attributions, external and uncontrollable attributions; that is, teachers and class atmosphere appear to be attributed to as factors contributing to success in learning English. However, internal and controllable factors such as effort, strategy and interest also play an important role as causal attributions for success.

Influence of Teachers

That language teachers are one important factor influencing learners' learning success as reported in this study is corresponding to what Kimura et al.

(2001) and Yan and Li (2008) discussed, which strongly supports the position that teachers can significantly facilitate or hinder the process of EFL learning. From the interview responses, it is also clear that teachers are attributed to as accountable for learners' successful output in learning English, which stems from their role as classroom monitors, as well as markers/graders using various teaching methods and methodologies to ensure classroom learning.

Teachers can have a great influence on their students' motivation to learn a foreign language, particularly on the students having experienced ineffective teachers or teaching. Also, inactive and uninterested students can be motivated by their teachers to learn a foreign language. Therefore, teachers should emphasize creating a good rapport between themselves and students. Moreover, Meng and Wang (2011) affirmed the influence of the teachers' language upon the EFL classroom interaction and they found that teachers' interactive language can and do affect students' intrinsic motivation in a positive way. In line with this, teachers' attitude to class participation, their verbal and non-verbal language, their relationship with students, their conscientiousness, humor and seriousness could enhance learners' intrinsic motivation as well (Lamie, 2005).

To promote learning success, teachers can play a key role in encouraging students' effort, interest, and strategy as they are internal and controllable and students themselves can put more effort in learning, show more interest in acquiring knowledge, and utilize certain strategies to learn better. Thus, students can improve themselves for a potentially more pleasurable learning experience. Also, language learners should be given advice that the learning achievement is not only influenced by their teachers. More or less, learning is an individualistic and teachers should help learners recognize that to a certain extent it is possible for learners to control their learning outcomes.

Influence of Effort and Strategy

By also attributing their success to effort and strategy, this shows that the students perceived their learning outcomes as controllable and changeable. Therefore, students can expect success and improvement for their future learning performance if they put more effort into it with proper learning strategies (Weiner, 2006). It is thus

the teachers' duties to convince students of the consequences of using appropriate learning strategies and exerting their fullest potential to succeed in learning English. According to Dörnyei (2001), teachers can encourage students to think that if they expend higher levels of effort, they will have higher possibility for success. Teachers can also encourage perceptions of students' own effort during the process of learning by being learner-focused or centered. What teachers can do is highlighting what students have learned rather than putting emphasis on grades, marks or comparing students' performance with others in class (Eggen and Kauchak, 1999).

The results also show that those who think they succeeded rate 'strategy' and 'effort' significantly higher than those who think they failed in learning English. This may indicate that successful learners acknowledge they can do well as long as they put effort into learning and can use proper strategies to achieve their learning goals. According to Xu (2009), successful EFL learners tend to use and develop some learning techniques and strategies appropriate to their individual needs.

Moreover, it is found that successful learners persist in their efforts of learning English (Stern, 1983). Thus, it would seem important to guide students who think they have not succeeded in learning so that they acknowledge the significance of effort which can direct them to successful learning. Moreover, students should be made aware that strategy and interest can help them improve as well; therefore, they may try harder to improve themselves subsequently.

To respond to the influence of learning strategies based on the findings of this study, what teachers can specifically do is plan and execute an strategy training program for students by 1) letting students discover more about themselves as language learners; 2) encouraging them to evaluate their learning and strategy use; and 3) giving them the opportunity to explore new learning approaches or techniques and make any personal improvements to their existing learning behavior (Scharle & Szabó, 2000).

Influence of a Learning Environment

In addition, with reference to the findings, teachers should also try to create a better, supportive learning environment for students. According to Littlewood (1984),

class atmosphere has been found to have a positive impact on learning English as a foreign language. In fact one of the characteristics of an effective learning environment is that there is an easy climate in the class in which the learners enjoy participating in the classroom activities. In line with this, relaxed atmosphere in the classroom is deemed necessary as anxiety hinders learning and makes the learners reluctant to express themselves (Abbott & Wingard, 1985). The teacher, therefore, should try to avoid placing anxiety on students. For example, the teacher should refrain from being over-critical as it is often one of the major sources of anxiety in EFL classes. At the same time, the teacher should be willing to deal with students' mistakes as they are natural and even necessary for effective EFL learning. Oxford (1999) points out that importance of making the classroom environment a non-threatening place. The classroom should be an environment where students are not scared of making communicative mistakes and being ambiguous in communicating. Situations that make students anxious such as correcting mistakes on the spot, calling on students at random (Young, 1991), calling on students without allowing them to prepare for the answers, and calling on a student simply because he/she is quiet or not concentrating should be avoided. Otherwise, what the teacher gets from students is usually not desired language use but threatened faces and this will have negative effects on the students' feelings and attitudes afterwards.

Influence of Other Attributional Factors

As reflected from the findings from the questionnaire and the interview, there are also other influences that are thought to affect the students' success in learning English. Among one of them is peers. The influence of peers in EFL learning can be reasonably related to the peer pressure effect (Falout and Maruyama, 2004). Peers are found to have both motivating and demotivating forces on EFL learners. The influences of competition and cooperation among EFL learners in pairwork, groupwork or teamwork can bring about advantages and disadvantages and so raise the need to make more inquiries into the possible effect of peers on EFL learners in various contexts.

The impact of family and luck of students in English learning success is feasible (Dörnyei, 2009) as English learning experience concerns learners' attitudes

towards learning English and can be affected by several situation-specific motives related to the immediate learning environment and experience, including fortunateness and family influence. Language learners' attitudes towards learning English are important because for some language learners motivation to learn a language can come from successful engagement with the actual language learning process.

Context-specific Analysis

It is possible to justify that the students in this context may regard teachers as most influential for their learning success for some reason. In an international program in which English is used as a medium of instruction, teachers may play a particularly more important role than in other contexts. This is in consistence with findings from previous studies. Chen and Lin (2009) investigated 198 Chinese students' perceptions of effective EFL teachers and found that the students studying in an international program put weight on teachers, their personality, and teacher-student relationship aspects. These were found to affect their learning outcomes considerably. More recently, Barnes (2010) examined the students' beliefs about the attributes of effective EFL teachers. 105 first year Korean university students taking EFL classes at an international university in Korea participated. Students considered rapport and delivery as very important characteristics of an EFL teacher. Particularly, rapport attributes were viewed as the most important in Korean university contexts where students had anxiety in English language learning. In this regard, this could be the case for Thai university contexts particularly in the English as a medium context as well.

Conclusion and Implication

The study has revealed that Thai university students in the international learning context have certain attributions for their success in learning English. Teacher influence is found to be the factor contributing to students' English learning success most. Students' own effort and use of strategies are the second and third rated attributions, followed by their interest in learning. Moreover, class atmosphere making students feel relaxed and motivated to learn is considered another important cause provided. This seems to indicate that both internal and external attributions

which are controllable and uncontrollable have some influences on students' learning.

On the one hand, the findings reflect that the students acknowledge the learning outcome as their responsibility and they themselves can control the outcome if they have learning exertion or can apply proper strategies to deal with tasks faced. On the other hand, teachers and class atmosphere, regarded as external and uncontrollable attributions, are also recognized as having an influence on students' success. Thus, it would seem rational to draw from the findings that teachers play a key role in students' EFL learning and should aim at creating a supportive, comforting learning environment to help establish the positive attributions and encourage students to build up anticipation for future success. Indeed, according to Geringer (2003), the most important factor in student learning progress is the teachers, and teacher quality outweighs other factors such as motivation and lack of skills needed as qualified teachers can create the best environment for learning.

It may be argued that it is difficult to see validity when analyzing only self-evaluation of students as it mainly concerns itself about satisfaction and preferences. In addition, participants may respond in a way that makes them look good or to defend themselves. However, it is always meaningful to examine their preferences or perceived causes of learning success as the findings can as a minimum provide hints or guidance on how to improve classroom management in learning a foreign language (Williams, et al., 2004).

In the end, it would seem fair to make a claim based on what the present study has found that teachers are one influential factor affecting students' sense of achievement. Teachers therefore are urged to deal with students' attributions effectively to facilitate learning motivation and expectations for future success.

Further research with different data collection methods and with different groups of learners on various aspects of self-evaluation is desirable and should provide scholars and educators in the field of language teaching more insights into studies related to causal attributions.

References

Abbott, G. and Wingard, P. (1985). *The teaching of English as an international language.* London: Collins.

Adiba, F. (2004). Study of attributions of low achievers and high achievers about the perceived causes of their success and failure. Ph.D thesis, University of Arid Agriculture, Rawalpindi. Retrieved 1 January 2013 from http://eprints.hec.gov.pk/578/

Barnes, B.D. (2010). The Attributes of Effective Lecturers of English as a Foreign Language as Perceived by Students in a Korean University. *Australian Journal of Teacher Education, 35*(1), 139-152.

Barnes, J. (2008). Are graduates of international MBA programs in Bangkok meeting Management needs of employers? *AU-GSB e-Journal*, *1*(1), 3-23.

Betancourt, H., & Weiner, B. (1982). Attributions for achievement-related events, expectancy and sentiments: A study of success and failure in Chile and the U.S. *Journal of Cross Cultural Psychology, 13*, 263-374.

Bruning, R.H., Schraw, G.J., & Ronning, R.R. (1999). *Cognitive psychology and instruction* (3rd ed.). Upper Saddle River, NJ: Merrill.

Carr, M., & Borkowski, J.G. (1989). Attributional retraining and the generalization of reading strategies by underachievers. *Human Learning and Individual Differences, 1*, 327-341.

Chen, Y. & Lin, S. (2009). Exploring Characteristics for Effective EFL Teachers: From the Perceptions of Junior High School Students in Tainan. *STUT Journal of Humanities and Social Sciences, 2,* 219-249.

Dörnyei, Z. (2001). Motivational strategies in the language classroom. Cambridge: Cambridge University Press.

Dörnyei, (2009). The L2 motivational self system. In Z. Dörnyei and E. Ushioda (eds.), *Motivation, language identity and the L2 self*. Clevedon: Multilingual Matters, 9-42.

Dörnyei, Z., & Murphey, T. (2003). *Group dynamics in the language classroom*. Cambridge: Cambridge University Press.

EF English proficiency Index. (2012). Retrieved October, 2013, from http://www.ef.co.th/epi/downloads/

Eggen, P., & Kauchak, D. (1999). *Educational psychology: Windows on classrooms*. (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Ernest, P. (1994). *An Introduction to Research Methodology and Paradigms*. RSU, School of Education: University of Exeter Press.

Falout, J. and Maruyama, M. (2004). A comparative study of proficiency and learner demotivation. *The Language Teacher, 28*, 3-9.

Fox, & Fern. (1992). quoted in Lovaglia, M.J. (2007). *Knowing People: the personal use of social psychology* (2nd ed.). Maryland: Rowman and Littlefield Publishers.

Fraenkel, J.R., & Wallen, N.E. (2000). *How to design and evaluate research in education*. New York: McGraw-Hill Higher Education.

Gao, S. (2008). Research on the role of attribution in reading comprehension among Chinese EFL learners. *Sino-US English Teaching*, *5*(10), 30-34.

Geringer, J. (2003). Reflections on professional development: Toward high-quality teaching and learning. *Phi Delta Kappan, 84*(5), 373.

Gobel, P., & Mori, S. (2007). Success and failure in the EFL classroom: Exploring students' attributional beliefs in language learning. *EUROSLA Yearbook*, *7*(1), 149-169.

Gobel, P., Mori, S., Thang, S.M., Kan, N.H., & Lee, K.W. (2011). The impact of culture on student attributions for performance: A comparative study of three groups of EFL/ESL learners. *Journal of Institutional Research (South East Asia) (JIRSEA), 9*(1), 27-43.

Graham, S. (1991). A review of attribution theory in achievement contexts. *Educational Psychology Review*, *3*(1), 5-39.

Horwitz, E.K. (1988). The beliefs about language learning of beginning university foreign language students. *Modern Language Journal, 72(3)*, 283-294.

Horwitz, E.K. (1990). Attending to the affective domain in the foreign language classroom. In S. Magnan (Ed.), *Shifting the instructional focus to the learner* (pp. 15-33). Middlebury, VT: North-east Conference on the Teaching of Foreign Languages.

Hsieh, P.H., & Schallert, D.L. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates motivation in a foreign language course. *Contemporary Educational Psychology*, *33*, 513-532.

Johnson, B.R. (1997). Examining the validity structure of qualitative research. *Education, 118(3),* 282-292.

Khaopa, W. (2012). Get ready: ASEAN Economic Community is coming in 2015. *The Nation.* Retrieved August 2, 2014 from http://www.nationmultimedia.com

Kimura, Y., Nakata, Y., & Okumura, T. (2001). Language learning motivation of EFL learners in Japan — a cross-sectional analysis of various learning milieus. *JALT Journal*, *23*(1), 47-68.

Kudrna, L., Furnham, A., & Swami, V. (2010). The influence of social class salience on self-assessed intelligence. Social Behavior & Personality*: An International Journal*, *38*(6), 859-864.

Lamie, J. (2005). *Evaluating change in English language teaching*. Macmillan: Palgrave.

Littlewood, W.T. (1984). *Foreign and Second Language Learning.* Cambridge University Press.

Maxwell, J.A. (1992). Understanding and validity in qualitative research. *Harvard Educational Review, 62*(3), 279-300.

Meng, X. and Wang, X. (2011). *Theory and Practice in Language Studies, 1*(1) 98-104.

Mori, S., Thang, S.M., Nor, F.M.N., Vijaya, L.S., & Oon, S.I. (2011). Attribution tendency and its relationship with actual and perceived proficiency. *GEMA Online Journal of Language Studies, 11*(3), 199-218.

Nelson, J., & Cooper, J. (1997). Gender differences in children's reactions to success and failure with computers. *Computers in Human Behavior*, *13*, 247-267.

Nunnally, J. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

O-NET reports. (2012). Retrieved September, 2013, from http://www.onesqa.or.th/onesqa/th/download/index.php?

Oxford, R.L. (1999). Anxiety and the language learner: new insights. In J. Arnold (Ed.), *Affect in Language Learning* (pp. 58-67). Cambridge: Cambridge University Press.

Patton, M.Q. (2001). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Peacock, M. (2010). Attribution and learning English as a foreign language. *ELT Journal*, *64*(2), 184-193.

Pintrich, P.R., & Schunk, D.H. (2002). *Motivation in Education* (2nd ed.). Upper Saddle River, New Jersey: Pearson Education.

Radnor, H. (2002). *Researching Your Professional Practice: Doing Interpretive Research*. Buckingham: Open University Press.

Romero, G.J., & Garza, R.T. (1986). Attributions for the occupational success/failure of ethnic minority and non-minority women. *Sex Roles, 14*(7), 445-452.

Scharle, Á., & Szabó, A. (2000). *Learner autonomy*: *A guide to developing learner responsibility.* Cambridge: Cambridge University Press.

Skaalvik, E. (1994). Attribution of perceived achievement in school in general and in math and verbal areas: relations with academic self-concept and self-esteem. *British Journal of Educational Psychology, 64*, 133-143.

Stemler, S.E. & Tsai, J. (2008). Best practices in estimating interrater reliability. In J. Osborne (Ed.). *Best practices in quantitative methods* (pp. 29-49). Thousand Oaks, CA: Sage publications.

Stern, H. (1983). *Fundamental Concepts of Language Teaching*. Oxford: Oxford University Press.

Swami, V., & Furnham, A. (2010). Self-assessed intelligence: Inter-ethnic, rural–urban, and sex differences in Malaysia. *Learning & Individual Differences, 20*(1), 51-55.

Taskiran, A. (2010). *Exploring EFL students' causal attributions of perceived success and failure in language learning process*. Unpublished MA thesis, Anadolu University.

Thang, S.M., Gobel, P., Nor F.M.N., & Vijaya L.S. (2011). Students' attributions for success and failure in the learning of English as a second language: A comparison of undergraduates from six public universities in Malaysia. *Pertanika Journal of Social Sciences & Humanities, 19*(2), 459-474.

The Economist Intelligence Unit. (2012). *Skilled labour shortfalls in Indonesia, the Philippines, Thailand, and Vietnam*. Retrieved August 1, 2014 from http://www.britishcouncil.org/labour_market_shortfalls_in_sea_eiu_final_18_july.pdf

Tsi, L. (2000). Student perceptions for foreign language study: A qualitative analysis of foreign language autobiographies. *The Modern Language Journal*, *84*, 69-84.

Ushioda, E. (2001). Language learning at university: Exploring the role of motivational thinking. In Z. Dörnyei, & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 93-126). Honolulu: University of Hawaii.

Vispoel, P. and Austin, R. (1995). Success and failure in junior high school: A critical incident approach to understanding students' attributional beliefs. *American Educational Research Journal*, *32*(2), 377-412.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, *71*, 3-25.

Weiner, B. (1986). *An attributional theory of emotion and motivation*. New York: Springer-Verlag.

Weiner, B. (1992). *Human motivation: metaphors, theories and research*. Newbury Park: Sage.

Weiner, B. (2006). *Social motivation, justice, and the moral emotions: An attributional approach*. Mahwah, NJ: Lawrence Erlbaum Associates.

Williams, M., & Burden, R. (1997). *Psychology for language teachers: A social constructivist approach.* Cambridge: Cambridge University Press.

Williams, M. & Burden, R. (1999). Students' developing conceptions of themselves as language learners. *The Modern Language Journal, 83,* 189-201.

Williams, M., Burden, R., & Al-Baharna, S. (2001). Making sense of success and failure: The role of the individual in motivation theory. In: Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (Technical Report No. 23, 171-84). Honolulu: University of Hawaii, Second Language Teaching and Curriculum Centre.

Williams, M., Burden, R., Poulet, G., & Maun, I. (2004). Learners' perceptions of their successes and failures in foreign language learning. *Language Learning Journal*, 30, 19-29.

Wiriyachitra, A. (2002). English language teaching and learning in Thailand in this decade. *Thai TESOL Focus*, *15*(1), 4-9.

Wongsothorn, A., Hiranburana, K., & Chinnawongs, S. (2003). *English language teaching in Thailand today*. Singapore: Eastern Universities Press.

www.nationmultimedia.com. (2005). *Six Years on and No Results in Education Reform*. Retrieved 30 January 2013 from http:// www.nationmultimedia.com/2005/article/education/389

Xu, Q. (2009). Moving beyond the Intermediate EFL Learning Plateau. *Asian Social Science, 5*(2), 66-70.

Yamane, T. (1967). *Statistics: An Introductory Analysis*, 2nd ed. New York: Harper and Row.

Yan, H. and Li, X. (2008). Causal attribution and its conceptions by non-English major postgraduates in China: A case study. *Canadian Center of Science and Education, 4*(4), 77-85.

Young, D.J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal*, *75*(4), 426-439.