

A Case Study of English Lexical Competence and Performance involving * Hospitality Students Conducting Tours

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Abstract

The study investigated the levels of words that students use, to explore their lexical complexity, and to analyze gaps between the lexical competence and performance in their speech while conducting tours. In total, 69 students enrolled in the Technical English for Tourism Business course at the Faculty of Liberal Arts and Science, Kasetsart University, Bangkok, Thailand were used as the subject of the study. The study involved descriptive research and used both quantitative and qualitative approaches to analyze the data which was collected from the students' assignments. The VocabProfile program, Type-Token Ratio, and exercises created based on each student's assignment were used as the research instruments. The results showed that the words used by the students were mostly in Base List 1, followed by Base List 2 and Base List 3, respectively. The Type-Token Ratio results showed that on average, students used 50% of their vocabulary repeatedly in their tour speeches. The overall students' scores for the exercise showed that students used vocabulary at about one-half of their vocabulary competence. It was considered that teachers of English for Tourism should emphasize increasing students' lexical performance by drawing out the students' existing lexical competence because spending time on focusing on arousing students to memorize a large amount of vocabulary without encouraging them to use the words is just a waste of time. The results further showed that students often avoid taking risks in using unfamiliar vocabulary and that was a big barrier preventing them from being better learners.

Keywords: 1. Lexical competence and performance 2. Type-token ratio 3. VocabProfile program 4. General Service List (GSL) 5. Conducting tours

* This research article aims to distribute some ideas about English lexical competence and performance of hospitality students in conducting tours.

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Introduction

English is one of the most used languages worldwide, including in Thailand. Furthermore, English is often the first alternative to be studied as a foreign language by Thai students. Thai students formally start learning English at kindergarten level through to university level. Learning English in the university is quite an important period since students have to study English in different fields - they need to study the English expected to be used in their careers, for example, English for Business, English for Engineering, English for Accounting, and English for Tourism. Studying English in Thailand sets the goal of using English like a native speaker, however, it is impossible for most Thai students to reach that goal for many reasons, for example they the opportunity to use English in daily life (Moolngoen, 2017, p. 161). The best level that many Thai learners can often reach is the level of nearly-native speaker. In Thailand, undergraduate students who are not studying an English major are generally well below this level. English language competence and performance are interesting issues regarding students' potential. Vocabulary is the foundation of knowledge in English, but somehow it affects a lot to English usage since the learners need to apply their vocabulary knowledge into communicative usage (Laufer & Nation, 1995, p. 308). Iamsirirak (2017, p. 146) stated that grammar is generally emphasized in the context of English teaching in Thailand; however teaching vocabulary should not be neglected. From my teaching experience, most Thai students have vocabulary competence, but their performance is limited, for example, when I ask a question about the meaning of a word to my students in class, many times they can tell the meaning correctly. However, I have noticed that I never hear those words used by my students, for example, when I asked my students to tell me the meaning of tourist, traveler, and visitor, they could tell me the meaning easily, but when I asked them to speak about these different types of person, each student often just used one of the three words repeatedly. Rarely did they use different words so that if they started using 'tourist', they continually used 'tourist' until they had finish giving their speech for conducting a tour.

According to Henrikson (1999, pp. 303-317), there are three dimensions of vocabulary development: partial to precise knowledge, depth of knowledge, and receptive and productive. The second dimension supports this study since it states that the depth of knowledge depends on the quality of the learner's vocabulary competence. That means, to develop the vocabulary knowledge, the learner should have lexical richness, including not only knowing various words in a vocabulary but also being capable of using series of words that are related to each other, for example, synonyms. However, the researchers realized that only investigating the competence of vocabulary in learners would result in inadequate data

for teachers teaching English to find the ways to develop vocabulary teaching because vocabulary performance is also as important as vocabulary competence. It could be useless and just a waste of time focusing only on increasing students' competence because if they could not apply that competence to produce good performance, those students would definitely not survive in the world of communication.

Since one of the researchers is responsible for teaching the English for Tourism Business course at the university level, investigating vocabulary competence and performance in the tourism field is an interesting topic. Taraporn, Torat and Torat (2014, p. 207) stated three main factors to attract travelers: plentiful tourist destinations, a service mind, and good English communication skills. This reflects that good English communication skills should be emphasized in teaching. As a tour guide, one should conduct tours using a broad vocabulary to maintain tourists' interest, so students in the field of tourism should have competence and performance with lexical richness. Before we can develop Thai students' vocabulary competence and performance, we should better know their current potential. The purposes of this study were:

- 1) To investigate the level of the vocabulary used by students by analyzing their vocabularies and categorizing them using the VocabProfile software to identify the proportions of vocabulary separated into 25 Base Lists. Base Lists are divided by considering the commonly usage of the words – the more commonly a word is used, the earlier Base List it appears.
- 2) To explore the students' lexical complexity by calculating the Type-Token Ratio for all students' assignments. A higher ratio indicates a more complex vocabulary usage; and
- 3) To determine the competence and performance of students based on their English vocabulary usage, based on exercises specially made for each student by the researchers that considered the vocabulary each student used. The results could indicate whether the students were fully utilizing their English competence.

Literature Review

To analyze the data effectively, related concepts were essential. In this study, the instruments used to analyze the students' lexical competence and performance were: the English used in tours conducted by students was analyzed using the VocabProfile software program, the Type-Token Ratio, the General Service List, and exercises specially developed based on speeches the students gave while conducting tours.

Competence versus Performance

Chomsky (1965, p. 4) believed that humans can speak a language using competence and claimed that competence is the language knowledge of the speaker or hearer while performance is the language use of the speaker or hearer. The Common European Framework of Reference (CEFR) (2001, p. 25) further defined competence as various kinds of knowledge and skill that a person makes use of to perform an action – language use in this study. Newby (2011, p. 20) specifically mentioned two keywords regarding performance – interaction and cybernetics - therefore, performance is not only the potential of behavior, but also the actual language use. According to Canale and Swain (1980, pp. 1-47), communicative competence comprises four components: linguistic competence, sociolinguistic competence, discourse competence, and strategic competence. Linguistic competence is concerned with the language code knowledge and Ai-Tamimi and Shuib (2009, pp. 29-55) mentioned eight English skills – listening, speaking, writing, reading, pronunciation, grammar, communication and vocabulary. Thus, vocabulary is one of the core components in linguistic competence.

An example of a study related to vocabulary competence has done by Bornstein and Haynes (1998, pp. 654-671). They studied the vocabulary competence of 184 20-month-old boys and girls. The results showed that girls performed better than boys on language measures. The study provided inspiration for further study since it made me realize that investigating the competence of the students at university level, especially for non-native speakers, is as important as investigating children's competence. Furthermore, to make the study more useful, investigating the students' competence along with their performance helps English teachers to be aware of a wider perspective.

Considering from my teaching experience, especially in the English for Tourism course, I had found that students were not that fluent in English – their English was often inadequate for communication, so investigating their vocabulary competence and performance would be a good start to identify their abilities which would be beneficial for teachers in creating lessons that were suitable for the students.

It should be noted that the definition of students' competence in this study refers to any vocabulary competence possessed by students, both the fresh and old vocabulary knowledge they possess. That means, whatever the students perceive can be used to determine their competence.

VocabProfile Software Program

VocabProfile is a software program created by Paul Nation; it is used to analyze the level of the vocabulary usage. The program provides 25 Base Lists of vocabulary – each Base List comprises 1000 words which are separated by the “commonly used level”, where the first 1000 words are the most commonly used. The less commonly used and more specific words are in higher Base Lists. However, the program provides one more special Base List – the Offlist Base Lists, in which the words are categorized as not appearing elsewhere in the list. This software helps to analyze the level of vocabulary knowledge of a language user in terms of the vocabulary level.

VocabProfile has been used as a tool by many researchers. For example, Sapa-asa (2006) analyzed the vocabulary used in upper secondary school and university students’ essays using VocabProfile and found that the university students used a higher number of words in Base List 3 than did upper secondary school students. Furthermore, vocabularies in Base List 1 were used in the highest numbers among the Base List Levels.

In the same way in the current study, the vocabulary used by students in the 25 Base List Levels categorized by VocabProfile could account for the students’ performance. The results could provide insight not only on lexical richness, but also on the levels of the words, that is for common words or more specific words. However, the vocabulary in Base List 26 (the Offlist Base List) was not analyzed since it contained words not commonly used in English.

Type-Token Ratio

The American pragmatist philosopher Charles Sanders Pierce introduced the terms ‘type’ and ‘token’ and both terms have been used in several fields, including language (1906, pp. 505-506). The Type-Token Ratio (TTR) is the calculation of the total number of different words (Type) and the total number of words (Token) (Baayen, 2008, pp. 243-244) (Thomas, 2005, p. 1). For example:

I do not really know how to go to Bangkok, and that is why I am asking you for help. (the number of tokens is “20”)

I do not really know how to go to Bangkok, and that is why I am asking you for help. (the number of types is “18”)

There are 20 words in the above example, but two of them are used twice – “to” and “I”, so the number of tokens is 20, the number of types is 18, and the TTR is then $18/20 = 0.9$. Youmans (1990, p. 584) cited in his study that Herdan, the computational linguist (1960), emphasized that a statistic such as the TTR is useful to evaluate the size of the vocabulary of the language user, so it is unavoidably related to vocabulary performance. It should indicate that the higher the study level, the higher the TTR. The TTR has been used in many studies. For example, Youmans (1990, pp. 584-599) used TTR to analyze the competence of 13 authors by considering their literary texts, after which he presented the results in the form of a Type-Token Vocabulary Curve.

Thomas (2005, pp. 1-21) investigated the lexical complexity of a talk in classroom given by a teacher using TTR. He analyzed the TTR of the teacher’s talk in each class and then presented the results graphically. His results showed that the TTR of the teacher’s talk was higher in a high-level class and *vice versa*. Richards (1987, pp. 201-209) stated that the TTR used to measure children’s lexical richness varied as the children aged, since they are developing their lexical richness all the time.

As we can see, the TTR is useful and can be used as a method of lexical richness analysis. Therefore, in this study, to appropriately evaluate students’ vocabulary performance, TTR was used as a quantitative method.

General Service List (GSL)

The General Service List (GSL) is an important word list and still has a large impact on learning English and relevant research, which was created by West (1953). The GSL is the list of 2,000 commonly used English words, so the words in the list should be a part of the vocabulary of a competent English speakers. The GSL has been used diversely, for instance to create other kinds of word list, such as the Academic Word List or the Business Word List, and has been applied in English vocabulary teaching and in evaluating students’ English vocabulary. The current study made use of the GSL as an instrument to create the exercise for each student based on their tour conducting assignments since the words in this list are not too specific and suited the exercise since the students should be able to use these words competently.

Methodology

Participants

Sixty-nine students enrolled in Technical English for Tourism Business course as a compulsory course were participants in this study. The participants comprised 7 males and 62 females, all of whom were studying in the third year.

Research Instruments

The research instruments were:

- 1) VocabProfile software which was used to analyze the proportions of the Base Lists of each student's vocabulary.
- 2) The Type-Token Ratio which was used to calculate the lexical complexity of each student.
- 3) All 69 students' assignments were investigated to identify repeatedly used words and the researchers made use of the assignments to create exercises for each student. Each exercise was composed of the list of the words used more than one time by each student. The more-than-one-time-used words were used to identify their synonyms. After developing the list of synonyms of each word, the words were compared to the General Service List (GSL) (West, 1953), and the words appearing in the GSL were used to create the exercise. The individual exercises based on the GSL were used to examine and compare each student's English competence and performance. The higher the score they got, the lower performance they had because if they did the exercises well, that indicated they knew the meaning of many words, but when they used the language in a real situation, they used some words repeatedly in all sentences instead of using the synonyms they had been taught – that is to say, they would be graded as having good competence but not good performance.

Procedure of the study

There were four main steps as described below.

First, participants were assigned to create a tour speech they could use that was 20 sentences long using details of the history of attractions, where it would be held and at what time, and other necessary information. They were allowed to search for the information needed in their tour speeches and sources could be in Thai and English; however, copying full English sentences was not allowed since this study wanted to investigate their vocabulary competence. Each student type the final speech into the Notepad program and submitted it for assessment.

Second, all assignments were analyzed using VocabProfile to identify the proportion of words in the 26 Base Lists that had been used in the assignment. Then, statistical analysis was used to evaluate the overall vocabulary performance of the participants.

After that, all assignments were analyzed based on the TTR, and then all participants' TTR scores were analyzed to determine the maximum TTR, the minimum TTR, and the average TTR.

Finally, exercises created based on participants' assignments were then distributed and the students were allowed to finish the exercise within one hour. They all were analyzed for vocabulary competence and performance by considering the scores from the exercises.

It should be noted that the words used to create the exercise here were only content words since their alternative words were more flexible than function words and prepositions, that is to say, for example, when the speakers used 'is', 'are', 'was', 'I', 'you', and 'we' which are function words and used prepositions, they could not use another word – as using 'I' instead of 'you' is impossible, so the speakers unavoidably used 'I' repeatedly. However, 'traveler' or 'visitor', which are content words, could be used instead of 'tourist' flexibly.

Findings

The findings of the study are explained in three main topics. Each topic is illustrated by providing graphs and interpretation.

Students' Vocabulary Size in each Base List

VocabProfile was used to analyze the vocabulary used by the students. Figure 1 demonstrates the results.

Figure 1: Maximum, Minimum and Average of Students' Vocabulary Size in each Base List

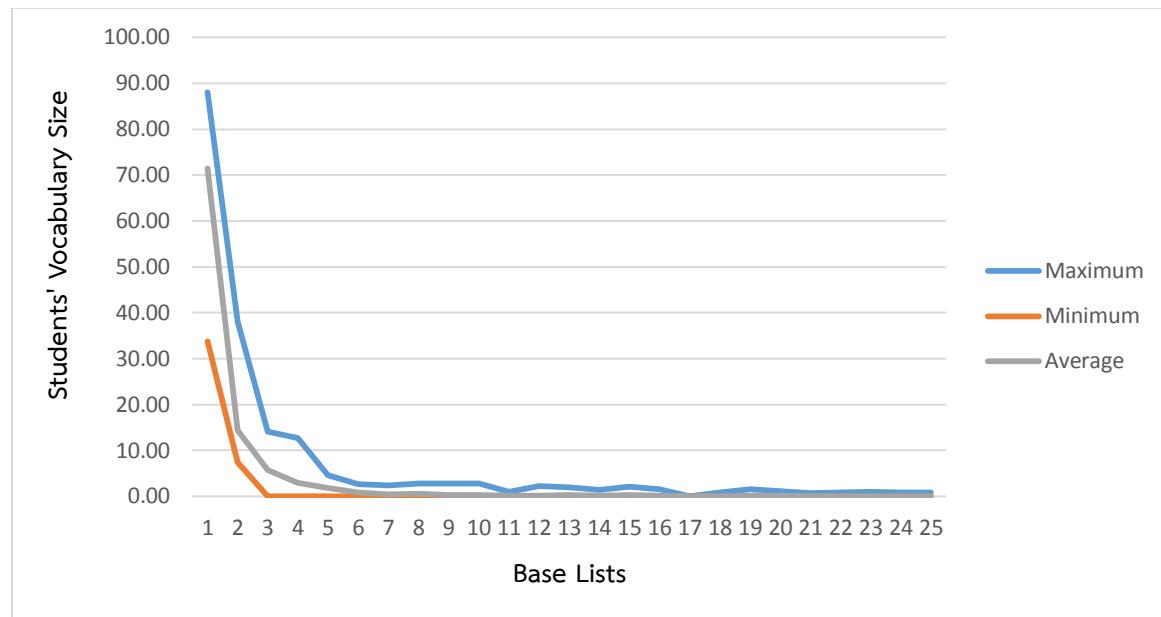
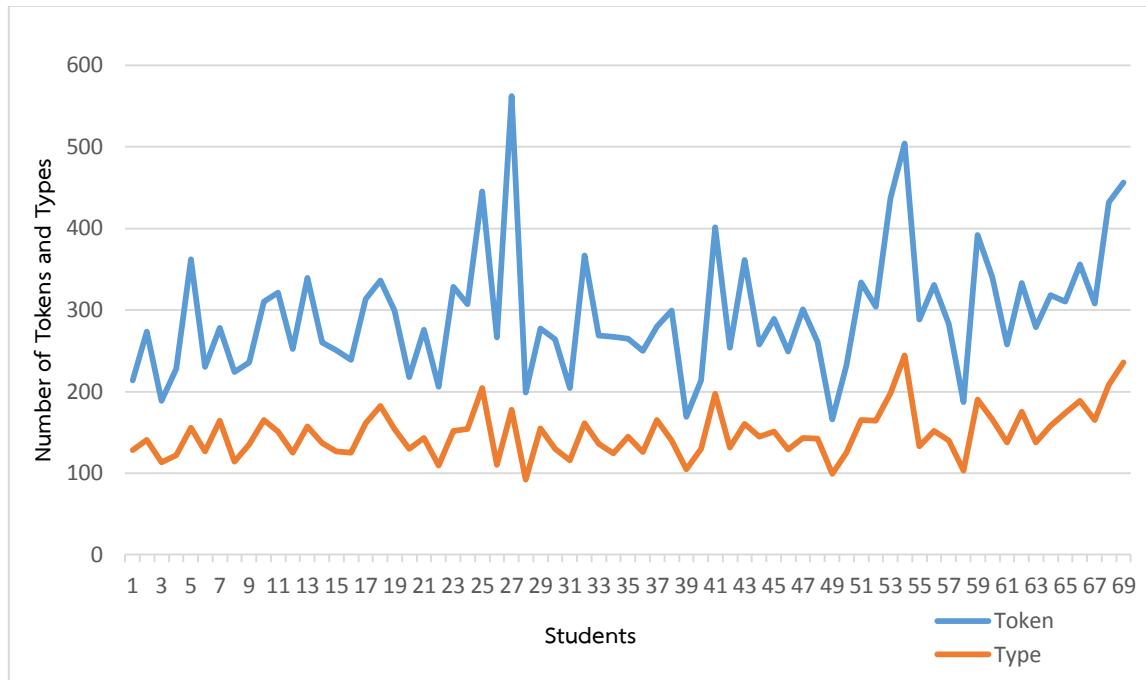


Figure 1 shows that an average 71.49% of the words the students used are in Base List 1. This indicates that most of the vocabulary the students have in their minds consist of quite simple words – that is not too specific. As expected, the percentage of words used from higher Base Lists decreased, respectively, with a reduced number of words from Base List 2 and so on. The average percentage of words in Base Lists 2, 3 and 4 were 14.35%, 6.54% and 2.95%, respectively, and the remaining 4.67% of the words were in the remaining Base Lists (Base List 5 to Base List 25). It should be noted that words appearing in Base List 26 (Offlist Base List) are not included in the graph since the words in this Base List, based a check by the researchers, are not truly English language but are Thai or a related language because most of them were names of tourist attractions and characters in myths among others.

Type-Token Ratio of the Students' Speeches for Conducting Tours

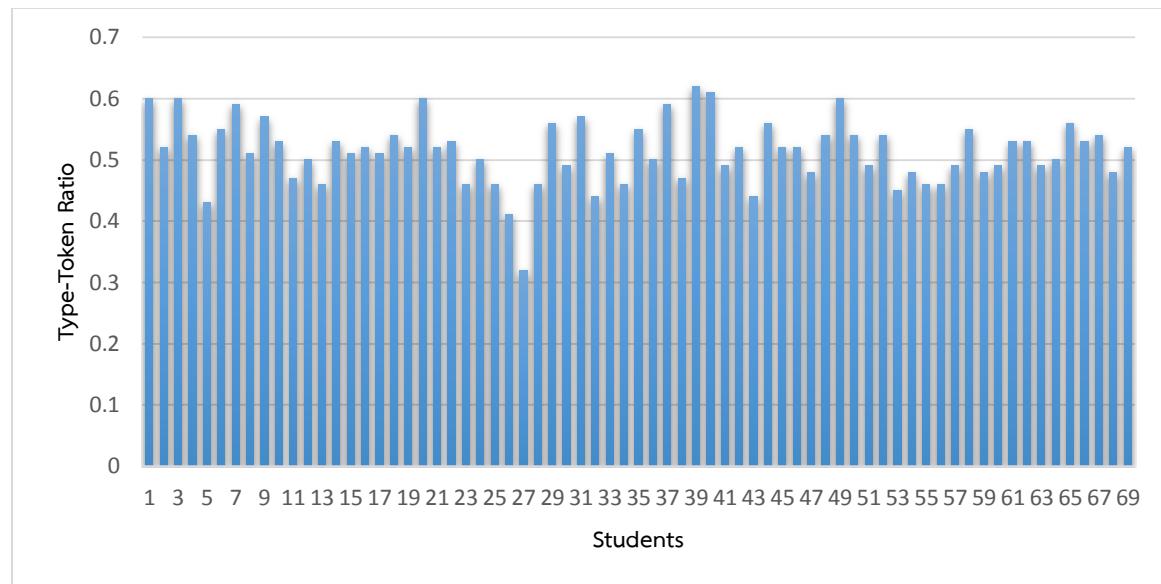
The students' assignments were analyzed to investigate the number of tokens and the types in each student's assignment as shown in Figure 2.

Figure 2: *Number of Tokens and Types in 69 Students' Speeches for Conducting Tours*



Since the students were assigned to create 20 sentences in the speech for conducting a tour, the number of the words they could use was unlimited but depended rather on each student. Figure 2 shows that the maximum token was 562 words while the minimum was 166 words, and the average token was 294.32 words. This indicated that the students had a variety of sentence lengths. In the same way, Figure 2 shows that the maximum number of types was 244 words while the minimum was 92 words, and the average was 148.51 words. Furthermore, the tokens were always higher than the types, but the gaps between token and the type for each student were different. These gaps were analyzed and the TTR was calculated as shown in Figure 3.

Figure 3: *Type-Token Ratio of Students' Speeches for Conducting Tours*



The TTR of students' speeches for conducting tours varied from 0.32 to 0.62. The average TTR was 0.51 which reflected the students' vocabulary performance and can be interpreted as the students actually used approximately 50% of their vocabularies despite the fact that they could have used alternative vocabulary in their speeches. The question is "Did they really use their language to their full vocabulary competence?". The answer is provided in the next results section.

Gap between Vocabulary Competence and Performance

The last step of this study was to analyze the gap between the students' vocabulary competence and vocabulary performance. To do this, different exercises were created depending on each student's 20 sentences. Words used repeatedly were chosen and alternative words were identified based on the General Service List (West, 1953). After that, students had to finish their individual exercise, and the researchers then checked their work answers and calculated the ratio of the points as shown in Figure 4.

Figure 4: *Ratio of Words with Known Meaning and Alternative Words*

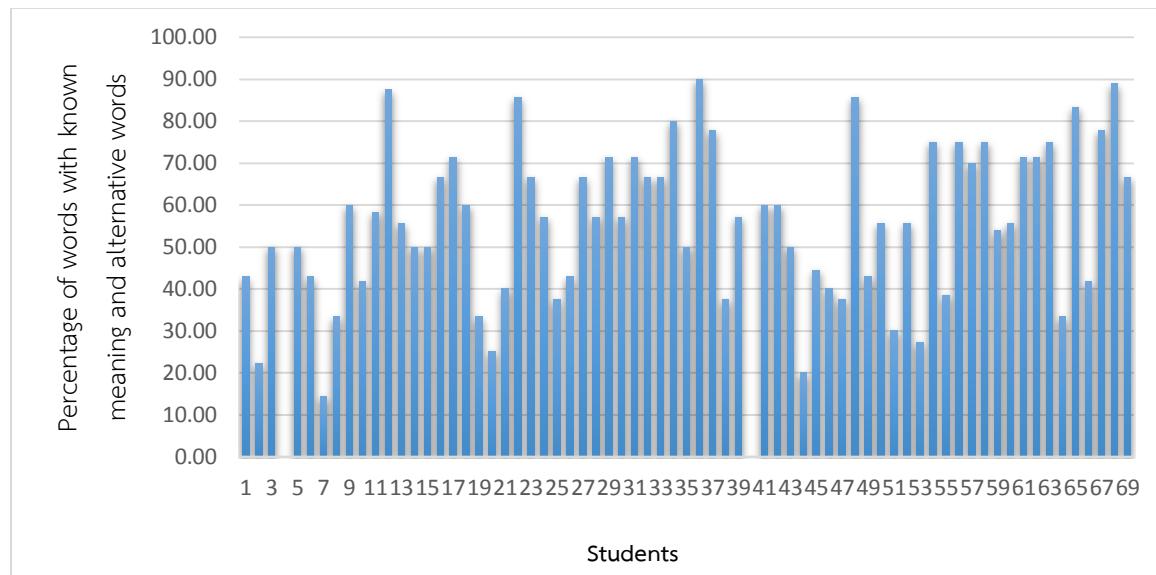


Figure 4 reflects the wide gap between vocabulary competence and performance. The minimum score was 0%, the maximum score was 90%, and the average score was 54.43%. The two students who had a score of 0% meant that they had quite equal vocabulary competence and performance. On the other hand, there were six students who knew the meaning of alternative words in the exercises since they could provide the meanings for nearly 90% of the words, yet somehow, they could not use them despite being capable of doing so. From an overall view, students could use approximately half of their vocabulary competence. More detail is provided in Table 1.

Table 1: *Number and Percentage of Students' Score in Each Vocabulary Competence and Performance Gap Range*

Range	No. of Students	Percentage
0.00-10.49%	2	2.90
10.50-20.49%	2	2.90
20.50-30.49%	4	5.80
30.50-40.49%	9	13.04
40.50-50.49%	13	18.84
50.50-60.49%	14	20.29
60.50-70.49%	7	10.14
70.50-80.49%	12	17.39
80-90.49%	6	8.70

Range	No. of Students	Percentage
90.50-100.00%	0	0.00
Total	69	100.00

Table 1 shows that the range 50.50-60.49% had the highest frequency of the students who can tell the meaning of the alternative words, followed by the ranges 40.50-50.49% and 70.50-80.49%, respectively. However, the largest frequency was between 40.50 and 60.49% with 27 students (39.13%) and this number influenced the reasonable average of 54.43%. The number of the students with over 40.50% score is of interest since it contains 52 students or 75.36% of all students. Thus three-quarters of the students could not perform to their competence and that should be a priority for the teachers in charge of advising the students.

Discussion

Vocabulary level used by students, students' vocabulary size, and gap between lexical competence and performance

The findings on students' vocabulary size in each Base List supports the study conducted by Sapa-asa (2006) that university level Thai students mostly use words in Base List 1 as we see been seen from the findings in the current study with the average at 71.49% of the words the students used in their tour speeches being in Base List 1. This indicates that even though they are third year university students, they still mostly use general, simple words.

The findings on students' vocabulary size in each Base List also affects the Type-Token Ratio since the students feel safer and prefer using only words that they are familiar with, and use alternative words seldom, resulting in the average TTR being low at 0.51. The evidence from this study indicates that many of the students felt that as long as they could be understood, repeatedly using words was acceptable. However, this is not attitude for students in the hospitality business because speaking style is very important in their careers. Their jobs will rely heavily on an attractive speaking style, involving tone, intonation, gesture, and lexical choices. Using the same words repeatedly will result in the tourist becoming bored and lead to poor feedback reports which could negatively affect the tour person's career.

Factors affecting vocabulary performance

Having studied the findings, the researchers further asked students in the class about the words they used and, also, why they did not use other words despite knowing their meaning, based on the answers they gave in the exercises. In general, the students could not explain clearly why they did not use the alternative words, they just felt that they preferred using the words they had in the assignments. They claimed that if they had used alternative words, they would have felt a bit strange and were not sure if doing so was really correct. This highlights three findings:

- 1) The students mostly acquire and use common words, especially words appearing in Base List 1.
- 2) They used simple words since they were familiar with those words, so it was safer to use the words that they know the meaning of well.
- 3) The students did not really know how to use words in a sentence, that is to say, even though the students knew the meaning, to use alternative words they also needed grammatical knowledge. So, they said they avoided using alternative words so they would not make mistakes. For example, many students believe that ‘tree’ and ‘plant’ have the same meaning, but mostly, they are more familiar with ‘tree’. When it comes to language usage, students know how to use, and also know where to put ‘tree’ in a sentence, but not so for ‘plant’. Some students hesitated to use ‘plant’ since they were not sure if it was correct to put ‘plant’ in the same order as ‘tree’ in the sentence, also they wondered whether ‘plant’ needed an ‘s’ to make it a plural. It was clear that the students did not want to take such risks in studying new things. They refused to try using new words which could help them develop their lexical performance, so taking a risk is what teachers should emphasize and focus on to support students to become better learners.

This finding emphasizes the concept of Constructivism Learning Theory as changing one’s schema is difficult, so rejection of learning something new happens easily (Champagne, Klopfer & Anderson, 1980, pp. 1074-1079). We define the phenomenon of when one rejects learning new thing as “cognitive inertia” and to solve this problem, teachers should motivate students to be more aware of the importance of trying to use new words.

Noom-ura (2013, p. 140) stated that a common style in teaching English in Thailand is memorizing since teachers mostly teach their students grammar and translation. Thai students become unavoidably worried about speaking English freely. They always limit their English usage by using only the sentences with the memorized pattern and vocabulary without trying to use some new patterns and words. To help students breach this obstacle, in the

researchers' view, the use of grammar should decrease as a tool for student evaluation; however, it cannot be ignored in teaching. There are many kinds of activity based on learning theories that English teachers can apply in the class, for example, in Behaviorism Learning Theory, one of the important aspects is repetition. Teachers can use 'single slot substitution drill' for practice with their students. To do this, teachers should give the pattern of a sentence, and also leave a blank in the sentence and allow students to provide a synonym and substitute it for the blank. Doing this repeatedly can help students become familiar with various words that share a similar meaning. Asking students to say the sentences is also essential as they can also listen to and learn from their friends. This is one component of the audio lingua method (ALM). However, just speaking and listening to the same pattern is not sufficient to improve a student's ability to be a good tour guide, so Constructivism Learning Theory (CLT) draws on support learning activities. CLT proposes that the learner constructs a cognitive structure or schema by using a cognitive apparatus, that is using existential knowledge to support new knowledge and making the connection between them. To follow this approach, teachers could give some unfamiliar words to students and then instruct them to construct sentences using those words. Students might apply unfamiliar words with the sentence structure they have in mind. If students make errors, the teacher should give them some advice and then let them learn how to solve their mistakes by correcting themselves. When they are able to create their own sentences using alternative words, then they are instructed to do some activities that support the use of various sentences in communication such by role playing. This involves allowing students to create their own stories and situations, but at the same time being strict regarding the series of words they are taught to use. According to Vygotsky's sociocultural theory of human learning (1978, p. 57), there are two levels at which humans learn: by interacting with people and by integrating in one's mental structure. This means that our students should interact with others to develop their English vocabulary skill because practicing some exercises may not provide sufficient support. Using than activity like role playing, as one communication language teaching approach, can help students to extend their communication skills which will be very important in their future careers. The atmosphere in the classroom is also an important factor to help motivate students to the better learners by providing them with suitable activities., Krashen (2009, pp. 10-31) mentioned five hypotheses about second language acquisition, however the researchers recommend one of them specifically in teaching vocabulary performance - The Affective Filter Hypothesis. This hypothesis is concerned with factors that indirectly support language learning – motivation, self-confidence, and anxiety. The suggestion is, thus, not about how to teach

students, but also about giving advice and supporting them to become aware of the importance of language in their career development. When students are motivated, confident, and have no anxiety, learning tends to proceed easily.

Recommendations for English teaching and future research

From Figure 4, the students had an average score of 54.43% for their English vocabulary competence, indicating that there were many students with a gap between vocabulary competence and performance. Instead of emphasizing increasing only vocabulary competence, teachers should step back, look at the broader view, and not focus on immediately feeding the students more vocabulary, but rather the teachers should look at finding ways to help students improve using the vocabulary they already have.

The results of this study could help teachers who teach English in Thailand, particularly in the field of tourism business, to consider more critically students' vocabulary competence compared to performance, and the study assist help teachers in finding some suitable way of reaching their students and may end up helping them develop students' performance which can play an important role in English communication.

Since the results of the study have shown that one of the factors affecting students' vocabulary performance is their lack of risk taking, further study should investigate how to motivate students and increase their confidence. Students should be trained to be ready to take risks in learning new things so that risk taking is rooted in students' minds and becomes a habit.

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References

A. Ai-Tamimi, M. Shuib. (2009). "Motivation and attitudes towards learning English: A study of petroleum engineering undergraduates at Hadhramout University of Sciences and Technology." *GEMA Online Journal of Language Studies*, 9(2), 29-55.

Baayen, R. H. (2008). "Analyzing Linguistics Data: A Practical Introduction to Statistics Using R." Cambridge: Cambridge University Press.

Bornstein, M. H., & Haynes, O. M. (1998). "Vocabulary Competence in Early Childhood: Measurement, Latent construct, and Predictive validity." *Child development*, 69(3), 654-671.

Canale, M. & Swain, M. (1980). "Theoretical Bases of Communicative Approaches to Second Language Teaching and Testing." *Applied Linguistics*, 1-47.

Champagne, A. B., Klopfer, L. E., & Anderson, J. H. (1980). "Factors Influencing the Learning of Classical Mechanics." *American Journal of Physics*, 48, 1074-1079.

Chomsky, N. (1965). "Aspects of the Theory of Syntax." Cambridge, Massachusetts: MIT Press.

Cobb, T. (2018). "Web Vocabprofile" [accessed 28 April 2018 from <http://www.lextutor.ca/vp/>], An Adaptation of Heatley, Nation & Coxhead's (2002) Range.

Council of Europe. (2001). "Common European Framework of References for Languages: Learning, Teaching, Assessment." Strasbourg: Language Policy Division.

Henrikson, B. (1999). "Three dimensions of Vocabulary Development." *Studies in Second Language Acquisition*, 21(2), 303-317.

Hymes, D. (1972). "On Communicative Competence." *Sociolinguistics*, 269-293.

Iamsirirak, E. (2017). "Teaching Vocabulary in English Literature for Thai L2 Students through Productivity-based Instruction" Veridian E-Journal, Silpakorn University: International (Humanities, Social Sciences and Arts), 10(5), 144-158.

Krashen, S. (2009). "Principles and Practice in Second Language Acquisition." [Online] Retrieved December 23, 2016, from http://www.sdkrashen.com/content/books/principles_and_practice.pdf.

Laufer, B., & Nation, P. (1995). "Vocabulary Size and Use: Lexical Richness in L2 Written Production." *Applied Linguistics*, 16(3), 307-332.

Moolnoen, S. (2017). "Teaching Knowledge for English Language Teaching." Veridian E-Journal, Silpakorn University: International (Humanities, Social Sciences and Arts), 10(4), 159-174.

Nation, I. S. P. (2004). "A study of the most frequent word families in the British National Corpus." In P. Bogaards & B. Laufer (Eds.), *Vocabulary in a Second Language: Selection, Acquisition, and Testing*. Amsterdam: John Benjamins. 3-13.

Newby, D. (2011). "Competence and Performance in Learning and Teaching: Theories and Practices." *The Selected Papers from 19th International Symposium on Theoretical & Applied Linguistics*.

Noom-ura, S. (2013). "English-Teaching Problems in Thailand and Thai Teachers' Professional Development Needs." *English Language Teaching*, 6(11), 139-147.

Pierce, C. S. (1906). "Prolegomena to An Apology for Pragmaticism." *The Monist*, 16(4), 492-546.

Richards, B. (1987). "Type/Token Ratios: What do They Really Tell us?." *Journal of Child Language*, 14(2), 201-209.

Sapa-asa, P. (2006). "An Analysis of Vocabulary Used in Essays Written by Upper Secondary School and University Students." Master Thesis of English Program, Faculty of Humanities. Bangkok: Srinakharinwirot University.

Taraporn, T., Torat, S. & Torat, B. (2014). "The Development of Hotel English Training Program Focusing on Task-based Instruction to Enhance Communication Skills." *Veridian E-Journal, Silpakorn University: International (Humanities, Social Sciences and Arts)*, 7(5), 205-221.

Thomas, D. (2005). "Type-token Ratios in One Teacher's Classroom Talk: An Investigation of Lexical Complexity." Birmingham: Birmingham University.

Vygotsky, L. S. (1978). "Mind in Society: The Development of higher Psychological Process." Cambridge, Mass: Harvard University Press.

West, M. (1953). "A General Service List of English Words." London: Longman.

Youmans, G. (1990). "Measuring Lexical Styles and Competence: the Type-Token Vocabulary Curve." *Style*, 24(4), 584-599.