A Study of Vocabulary Size, Competency, Learning Strategies, and Perceptions of Problems with Vocabulary Learning of Students with Learning Disabilities

Buarattana Attachoo
Thammasat University
3ua.attana@gmail.com

Panna Chaturongakul
Thammasat University
pannacha@gmail.com

Abstract

This research is a mixed method study that was designed to explore vocabulary size, knowledge, learning strategies, and problems with vocabulary learning of the students with learning disabilities. it investigtes the following key questions: (1) What are the vocabulary size and knowledge that LD students have? (2) What are the vocabulary learning strategies used by LD students? (3) What are LD students' problems with vocabulary learning? Findings to the questions were from multiples data collection methods: vocabulary level test (2000 word level), vocabulary knowledge test, questionnaire and semi-structure interview. The investigation focused on students with learning disabilities, who were studying in grade 12 at Kasetsart University Laboratory School, Center for Educational Research and Development (KUS). The findings show that the participants have varied vocabulary level sized and none of them surpassed the satisfied level. For vocabulary knowledge, participants seem to perform well with productive spoken aspect; in contrast, have the lowest performance at Productive form and meaning aspect. Result from questionnaire shows that teachers play important role to them when they learn new words, as result of the mostly used strategy was to ask teacher to learn their new vocabulary. Moreover, participants often took note in class, but they rarely used mind mapping to memorize the vocabulary they had learned. Lastly, it was surprised that they decided to go for the class taught by English native teachers. The research results provided useful data for pedagogy implication concerning learners, teachers, policy makers and further research including a major implication of the study is that teachers should consider appropriate environmental arrangements, instructional materials and equipment, and scheduling to maximize LD students' learning.

Keywords: Learning Disabilities Vocabulary Size, Vocabulary knowledge, Vocabulary Learning strategies.

1. Introduction

Primarily, students who study with their learning abilities at either with high or low level of study, at least, are able to learn English in the normal language learning process. Unfortunately, there are some students, who are significantly disadvantaged, resulting in an adverse affect on their language learning abilities. These students are recognized as learning disabilities (LD) students. However, this does not mean LD learners cannot study at all. They might merely need special education that is appropriate for their learning nature to facilitate them. In Thailand, there are many LD students in many schools. According to section 10 of the National Education Act 1992 stating that 'persons with physical, mental, intellectual, emotional, social communication, and learning deficiency…shall have the rights and opportunities to receive basic education specially provided'. Thus, schools in Thailand

are obligated to teach students with disabilities into their class. Hence, it is clear that LD students are regarded as part of the education system that must not be left behind.

Generally, Thai students have been taught mostly through the Grammar Translation Method (GTM) for many decades. Moreover, new words were learnt by using rote memorization (Pawapatcharaudom, 2007). Thai researchers have found that the lack of vocabulary competency has become a major problem for Thai students. This problem seems to slow down the abilities to acquire other English skills and leads to a bigger, more holistic problem, which is low English performance of Thai students. Consequently, one of the very first steps to solve problems about vocabulary learning and knowledge in is to identify vocabulary learning problems as a priority (Liangpanit, 2002; Nomsiri, 2005; Mongkol, 2008). Although the statement mentioned above might be for Non-LD students, the same apply to the LD students. They are even more important focus group as they are special students and need to be paid more attention from their teachers. Not only their vocabulary competency that should be investigated, problems encountered when they learn vocabulary should be also elaborately studied. As an English teacher, I believe it is important to explore and learn about their English and vocabulary competency including problems with vocabulary learning in the same way that non-LD students have been explored.

Research Objectives
1. to examine the vocabulary size and vocabulary competency of LD students;
2. to investigate vocabulary learning strategies employed by LD students; and
3. to explore LD students' perceptions of problems with vocabulary learning

Research Questions
1. What are the vocabulary size and competency that LD students have?
2. What are the vocabulary learning strategies used by LD students?
3. What are LD students' perceptions of problems with vocabulary learning?

2. Literature Review

Learning Disabilities

Definition of Learning Disabilities

The most important step to conduct this research is to know students with Learning Disabilities (LDs). The first step is simply to learn who they are by looking into the definitions of learning disabilities. One of the clearest definitions is the definition appeared in Bender (1998) introduced by the National Joint Council on Learning Disabilities:

> Learning disabilities is a general term that refers to a heterogeneous
> group of disorder manifested by significant difficulties in the
> acquisition and use of listening, speaking, reading, writing reasoning
> or mathematical abilities. These disorder are intrinsic to individual,
> presumed to be due to central nervous system dysfunction, and may
> occur across the life span. Problems in self-regulatory behaviours,
> social perception, and social interaction may exist with learning
> disabilities but do not by themselves constitute a learning disability.
> Although learning disabilities may occur concomitantly with

other handicap condition (sensory impairment, mental retardation) or with extrinsic influences (cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences." (p. 21)

For the researcher, when the students were diagnosed as those with learning disabilities (LD students), they were also mostly found to have problems with language learning. These LD students were defined as

the students who are not handicaped people; however, have difficulties in the acquisition and use auditory ability, visual ability, and memory function. The difficulties result disorders in productive language skills: writing and speaking, receptive language skills: reading and listening putting impact on their emotion problems. Hence, the lack of motivation and inspiration to learn may arise due to the emotional problems. Nevertheless, the difficulties, disorders and problems on language learning vary from person to person.

Another outstanding perception that might be misunderstood from the characteristics of learning disabilities is the difference in concepts between being disabled and handicapped. For disability, the dysfunction occurs from an organ system that departs from a specific health standard and the diagnosis of the existence or degree of disability is detected by atrained professional. In contrast, a handicap can be discovered when the disability occurrs and interferes with the performance of a person and the level of interference is so high that that person requires special consideration or compensatory advantages to complete an activity (Bender 1998). Although learning disabilities can be diagnosed from the professional trained practitioners, there has been a controversy issue pointed out recently that learning disabilities are not found from only being assessed by only single psychological test. In accordance with the recent trend of defining the term 'learning disabilities', the definition combines an integrative condition comprising of academic, neurological and cognitive perspective. (REED Institute) Therefore, a current definition of LDs usually emphasizes on complicated elements of LDs and requires any cautious investigation.

Characteristics of Learning Disabilities

Characteristics of learning disabilities consist of several different aspects of both physical and mental dysfunctions as the following details indicate:

1. Discrepancy Factor
2. Academic Learning Difficulty
3. Language disorder
4. Perceptual Disorder
5. Metacognitive Disorder
6. Social Emotional problems
7. Memory Problems
8. Monitor Disorder

For young learners, the learning disabilities students (LD students) have to go through their childhood and then teenage years living with their learning disabilities. They have to deal with their academic difficulties, as concluded by Delshler and Schumaker (as cited in Alley, Deshler, Clark, Schumaker, & Warner, 1983) in that the adolescence seem to gain academic achievement with very low scores in language and mathematic skills. Moreover, their academic development is almost non-exsisting in improvement when they start their tenth grade. Lastly, the majority of LD students performs poorer in their learning skills and has very low awareness of applying learning strategies such as test-taking skills, note taking in class, listening comprehension, monitoring writing errors and scanning. This conclusion shows the link between conditions of learning disabilities and the problems in academic situations that they have to deal with.

Deficits in Language and Vocabulary Development of Students with Learning Disabilities

For students with learning disabilities (LD students), there are three perspectives that affect their abilities: ability-deficit, skill-deficit, and inactive-learner perspectives (Bender 1998). Generally, the auditory-deficit is almost exactly the same as the visual-deficit; however one difference between these two is how the input information is taken in. Moreover, auditory disabilities can be explained as when the auditory input or linguistic area in the brain is dysfunctional, a language deficit will become obvious. Nevertheless, some LD students, who generally have problems with language learning, still find that their vocabulary knowledge can be their weakness. This may be because they have language impairment even though they have average or greater nonverbal abilities and social functioning. However, these LD students can get along very well with their classmates although they just stay silent in class and wait until the activities end when it comes to reading comprehension exercises (Swirling & Sternberg 1996).

Language Learning Strategies
The Definition of Language Learning Strategies

Since the word "strategies" and "tactics" share very similar connotations, which are planning, competition, conscious manipulation, and movement toward a goal, Oxford explained further that the term "strategy" can be, therefore, used to replace with the term "tactics". Oxford also described the term "learning strategies" as "steps taken by students to enhance their own learning, tools for active, self-directed involvement, which is essential for developing communicative competence, and also specific actions taken by the learner to make learning easier, faster, enjoyable, more self-directed, more effective, and more transferrable to new situations" (p. 7).

Classification of Language Learning Strategies

The classification of language learning strategies that appears the closest to the target setting of this study as the classification was derived from students' interviews based on the study entitled "Factors Related to the Use of Language Learning Strategies used by Thai Public University Freshmen" (Prakonchati, 2007, pp. 134-149). The strategies are divided into four main categories: Strategies for preparing oneself for classroom lessons, Strategies

for understanding the lessons while studying in class, strategies for improving one's language skills, and strategies for expanding one's general knowledge of English.

Vocabulary Learning Strategies
Definitions of Vocabulary Learning Strategies

The term 'vocabulary learning strategies' (VLS) has been defined by many researchers. To begin with, Catalan (2003) provided a comprehensive definition of VLS as 'knowledge about the mechanism (process, strategies) used in order to learn vocabulary as well as steps or actions taken by students; firstly, to find out the meaning of unknown word; secondly, to retain them in long-term memory; thirdly, to recall them at will; and lastly, to use them in oral or written mode' (p.56). Intaraprasert (2004) defined VLS as 'any set of techniques or learning behaviors which were used by language learners to discover the meaning of a new word, to retain the knowledge of newly- learned words, or to expand their knowledge of English vocabulary (p.9).

Classifications or Taxonomies of Vocabulary Learning Strategies

For this study, the researcher found one thesis conducted by Wongsiri (2012) applied both taxonomies of Schmitt (1997) and Intaraprasert (2004) and created the questionnaire containing strategies that were suitable for Thai learners for her study. Therefore, the researcher decided to choose some of vocabulary learning strategies from this researcher and slightly adapted some words to facilitate the participants when they complete the questionnaire.

Vocabulary Knowledge

Testing vocabulary is similar to testing in other areas of language knowledge and use. In some way, testing vocabulary is easier than testing grammatical knowledge because the units to test are more obviously separate; it is not too difficult to identify what a word type is. There are two major types of vocabulary tests. First, there is a test for measuring vocabulary size or how many words that the language learners should know. According to Nation (2001), the vocabulary level test (VLT) was developed to find where learners' vocabulary needed attention. It can be used to work out what needs to be taught, to monitor and encourage learning, to place learners in the right class. The information gained from the test, then, can be used to plan a course and to help individual learners. Thus, the researcher adapted the VLT as The Vocabulary Size Test (VST), in order to be suitable to use for research proposes to evaluate a particular group of population that the researchers want to examine. Another test was the Vocabulary Competency Test (VCT). For this test, the researcher decided to developed the test from vocabulary knowledge aspects presented by Nation to help cover all topics including word forms, meaning and use (Nation, 2001). With this newly developed vocabulary knowledge test, the test items were also created with in a contextualized test form. All of the aspects appeared as vocabulary knowledge to test to measure how well the learners know a word and measure the awareness of the systematic pattern that lie behind words. For example, not only to know whether learners can spell words, but also whether learners can read or recognize word class in both receptive and productive knowledge (Nation, 2002). This kind of test might be more suitable with students with learning disabilities as it includes

specific dimensions of particular vocabulary knowledge so that the participants are tested elaborately.

Related Studies

The research conducted by Fan in 2003, which investigated the frequency of VLS use, perceived usefulness, and actual usefulness of VLS, showed that participants with high proficiency applied more sources, such as reading outside class, guessing, dictionary, and actual use of the known words, than those participants with less proficiency and used repetition and association strategies more frequent. This was one of the studies that referred to students with low proficiency, and all participants were 1,067 tertiary students from 7 universities in Hong Kong. Another study was conducted by Muensorn (2007) using participants who were lower level Thai students studying in Prathomsuksa 6 in Thailand. The study focused on the vocabulary learning strategies. The findings revealed that bilingual dictionary was the most frequently used discovery strategy. Another relevant study found was conducted by Wongsiri in 2012. The questionnaire used in the study was adapted from VLS taxonomy developed by Intaraprasert combined with VLS taxonomy developed by Schmitt (year)). Although Thai learners appeared as participants in the previous studies, none of the above studies used students with learning disabilities as subjects.

It is quite challenging to find studies involving vocabulary competency alongsode problems with LD students' vocabulary learning. However, there are some that desrve recognition. A study by Petchnuy (2013) found out LD students were able to read English words by using a technique called the sight word approach. The reseaercher used the program "Picture Me Reading" as the tool to collect data and applied to participants, who were grade 3 students. The findings revealed that their English word ability was at good level. Next, Teeraladanon (2013) compared the ability of reading and writing in students with learning disabilities. Although the participants in these studies were LD students, they were very young learners studying in primary levels, and the studies focused on abilities in reading and writing English.

Methodology

Research Design

In this study, the researcher has decided to investigate students with learning disabilities (LD students) that actually studied alongside non-LD students. Consequently, the researcher employed a mixed-method research procedure consisting of both quantitative and qualitative methodology (Dörnyei, 2003)

Participants and Instruments

Participants or this study were 7 students with learning disabilities (LD students), studying in Matthayom 6 (Grade 12) in a school in Bangkok. All participants were diagnosed using the school criteriea withcooperation between school teachers and relevant professionals including psychologist and specialist.

There are four instruments used to collect data in this study. The first two, which are Vocabulary Size Test (VST) (Appendix A) and Vocabulary Competency Test (VCT) (Appendix B) were used to measure how many words and how well participants knew them. The other two are questionnaire, which were used to investigate vocabulary learning strategies as appeared in Appendix C, and an interview, which is addressed to participants individually as can be found in Appendix D. All research instruments were verified and approved by two experts including the principal and head of foreign languages department in the school.

Data Collection

Firstly, participants were required to complete the Vocabulary Size Test (VST) and then the Vocabulary Competence Test (VCT) on the 18th April 2015. The researcher administered both tests in such a sequence so that the researcher knows how many words participants could recall before moving to investigate how well their competency would be. All participants did the VST in the morning all together and took approximately 30 minutes to complete the tests. After that, they were allowed to take a break for and hour. Next step, each participant was addressed the VCT individually with the researcher.

On the following day, participants were distributed the questionnaire to explore their use of vocabulary learning strategies. After the questionnaire, the in-depth interview was conducted one to one to further ask about the participants' problems involving their vocabulary learning. Participants were asked about their strategies after the questionnaire so that they had a chance to explain their perceived strategy use in further detail. All answers were recorded and transcribe afterwards into Thai and, later into English by the researcher.

Data Analysis

Data collected from the four instruments was analyzed in the following ways:

Scores collected from the vocabulary Size Test (VST) —The participants' scores were interpreted in accordance to the Guide to level test invented by Nation (2002).

Scores collected from the Vocabulary competence test (VCT) –The findings were analyzed on the answers from each participant item by item in order to show how well each of them was able to employ their vocabulary competency in relation to each vocabulary aspect. Additionally, the participants' scores were calculated as the total number of participants, who answered the question correctly, in respect to each vocabulary knowledge aspect. Then, the numbers of participants were put in to table to see the highest, lower, and lowest scores gained from participants. The higher number in the table represented that they were better at that aspect of vocabulary knowledge.

Questionnaire's responses—The results from the questionnaire were illustrated by showing the number of students that selected the most frequent strategies used to the strategies that they never used.

Interview—The participants' responses from the group interviews were analyzed by using content analysis to find out which problems occur when participants encounter, consolidate new vocabulary and expand their vocabulary knowledge. The answers from the interview were coded and categorized as themes by selecting similar ideas and information commonly spelled out by the interviewee.

4. Findings and Discussion

Vocabulary Size

The interpretation for the test score is divided into 5 major parts. To reach the satisfied level is to get a score of at least 27 out of 30. This means that learners are expected to know at least 90% of the words of the 2,000 words level (Nation, 2002). The findings were represented as the table below:

Vocabulary size test (VST) scores of student 1 – 7 ranking from the highest to the lowest

Participants	VST Scores (2000 words level) (out of 30)	Interpretation Based on Nation's
Student 5	25	
Student 1	20	Too many unknown words.
Student 2	19	
Participants	VST Scores (2000 words level) (out of 30)	Interpretation Based on Nation's
Student 4	17	
Student 6	10	
Student 3	9	Too many unknown words.
Student 7	6	
Mean score	15.14	

The results show that none of participants gain satisfied level that a test taker should gain, which is at least 27 out of 30. That means all participants have too many unknown words and still need to increase their vocabulary knowledge to reach satisfied level before entering into upper academic level.

Vocabulary Competency

Firstly, the participants' vocabulary knowledge according to the word aspect of form, including sub aspects such as spoken, written, and word part aspects. All participants answered correctly in the productive spoken aspect of word knowledge showing that they performed best in this aspect. On the contrary, the participants performed worst in the item signifying the receptive spoken aspect represented by the result showing that none of them were able to answer the questions correctly in both 1st and 2nd word levels.

Secondly, finding of vocabulary competency in relation to word meaning informed that the participants did well in the productive association aspect of word knowledge with the

correct answers form 6 participants. In contrast, none of the participants gained a point in the productive form and meaning aspects.

Finally, regarding how well the participants used the vocabulary, the findings showed that most of the participants were able to do the test more correctly on the receptive grammatical functions aspect when compared to other aspects of vocabulary use represented by 5 participants who provided the right answers. However, they couldn't complete the question on the aspect of productive collocation of vocabulary use.

Vocabulary Learning Strategies

The vocabulary learning strategy questionnaire (VLSQ) allowed the participants to report how often they used vocabulary learning strategies (VLS), from the most to the least frequently used when they encountered a new word, consolidated a word once it has been encountered, and expanded vocabulary knowledge, respectively.

Firstly, when the participants encounter a new word, the results revealed that the participants commonly used the following five VLSs: *Ask teacher for synonym of new word*, *Ask classmate for meaning*, *Ask* teacher *to translate to Thai*, *Analyze any available pictures or gestures from paragraph to determine the word's meaning*, and *Guess the word's meaning from contextual context in reading*. However, the strategies that have been used the least was *Use monolingual dictionary*.

In terms of VLSs used for consolidating a word once it has been encountered, the findings showed five VLSs, which have been mostly used by the participants. These strategies include *Take note in class*, *Study and practice the new word in group*, *Image word's meaning*, *Connect the word to personal experience*, and *Study the spelling of the word*. In contrast, there are two strategies which participants rarely used: *Put English label on physical objects* and *Use mind mapping*.

Finally, the VLSs most commonly used by the participants when expanding their vocabulary knowledge is *Attend English - medium classes* and *Interact with English speakers*. Interestingly, none of VLSs have been regarded as the least used by the participants.

To sum up, the strategies that the participants used the most when they encountered a new word was to ask the teacher for a synonym of the new word and the least used *strategy* was to use a monolingual *dictionary*. The strategies they mostly used when they consolidated or memorized and retained the new word was to take notes in class. Lastly, the strategy that the participants rarely used was to do mind mapping. The strategy that the participants admitted to use mostly to expand their vocabulary knowledge was to attend English-medium classes.

Perceptions of Problems with Vocabulary Learning

The interviews were conducted to elicit problems with vocabulary learning that might appear during which the participants encountered, consolidated, and expanded their

vocabulary. Therefore, the findings include problems from their general lives in school and specific situations when they learn vocabulary. Three main perceptions of problems were found from the coding including the problems arisen from participant's own disabilities, contextual issues, and characteristics of English language.

For the perception of participants' own disabilities, most participants, to a certain extent, blamed themselves when discussing problems with learning at school because of themselves. For example, Student 1 told the researcher that 'I am lazy and can pay attention for only short period'. Not only were problems with learning English were pointed out by the participants, some problems were also thought to be caused by another reason, which were their teachers. Four participants told the interviewer that they did not want to study English because of what they did not like about their teachers. Additionally, problems arising from the surroundings also caused problems for the participants, which were affected by class size as Student 4 told the interviewer thsat 'In the classroom, there are so many students that I got distracted from the lesson'. Lastly, problems occurring from the characteristics of English language were also mentioned, for instance, Student 5 said that 5 that 'I don't understand English grammar why verb forms have to be changed'.

Data Discussion

The results from the VST seem clear that none of the participants have the expected vocabulary size that they should. As they were going to move to the university level, their vocabulary size should be at least 90 percent of the 2000 words level. The findings correspond to one of the characteristics of the learning disabilities students, their deficit in vocabulary development. Most of the LD students have low efficiency in *phonological coding* when they need to analyze a sound sequence. They often struggle with *verbal mediation* when they analyze meaningful words in sentences (Bender 1995, p. 199). In addition, LD students might require a longer response time when they choose or recall specific words, resulting in trouble with memorizing, decoding and recalling the vocabulary in their memory (Mercer and Mercer, 1997). However, there was one of the participants who reportedly gained the highest VST score of 25 out of 30, which almost reached the satisfactory level as specified in the Guide on vocabulary level. (Nation 2015) Not only the students who gained 25 points, but also the other participants who gained 20, 19, and 17 points out of 30. This can be inferred that not all LD students have low vocabulary development; in fact, some of them were not far different from the non-LD EFL/ESL students.

As for the findings from the VCT, there are areas in which LD students seemed to perform the best and, other areas they might need to work harder to develop. Among nine aspects of vocabulary knowledge, the participants gained the highest score in the productive spoken aspect of word knowledge. On the contrary, the participants performed worst in the receptive spoken aspect, which is the same area that they performed the best for productive skills. This shows that the majority of students with learning disabilities might be better at reading the words they see than recalling the words they hear. Another outstanding outcome from the VCT reveals that none of the participants gained a point in the productive form and meaning aspects. This means that all of participants were unable to produce the proper word form or show the different meanings.

In terms of VLS, these learning strategies were categorized according to the three main stages of vocabulary learning. The first stage was when participants encountered new words. In this stage, they always asked their teacher for a synonym. When they wanted to remember and retain their vocabulary, they prefered to take notes in class, study and practiced the new word in group activities or with their classmates, and imagined the word's meaning. Finally, they chose to attend an English class taught by a native teacher to expand their vocabulary knowledge.

For the first stage, of encountering a new word, it was interesting that participants intended to apply social strategies in accordance with Schmitt's taxonomy (Schmitt, 1997). In general, LD students have been assumed to be the students with low self-concept (Bender 1992); however, the findings show that this claim is not always true. LD students seemed to feel comfortable in asking their classroom teacher and working on their new vocabulary with their peers. The next stage of vocabulary is consolidating the vocabulary learned. The participants decided to take notes in class, as some participants would rather write the meaning they were told by the teacher in class than revise by themselves outside the classroom. Again, the findings confirm the fact that LD students selected social strategies to consolidate new words they learn through practicing in groups. Lastly, the strategy, surprising to the researcher, they picked was to study with a native teachers to expand their knowledge instead of implementing other convincing vocabulary learning strategies such as watching English-speaking movies or TV program in English. This vocabulary strategy they preferred was, again, a social strategy, which required interaction with other people and seemed to contrast with a popular perception of LD students, who are stereotypically cast in a rather anti-social. Interestingly, some VLSs used by LD students in this study, such as dictionary use and note taking, were actually those used by non-LD students as reported in Muensorn's (2007) and Fan's (2003) studies, respectively. Moreover, this research shows that LD students, usually percieved as introverts, preferred to consult their class teachers when encountering vocabulary problems. This was the same strategy used by non-LD participants with high learning proficiency in Fan's study (2003).

In accordance with the characteristics of the participants who are LD students, the findings from the interview show that being anLD students affects both directly and indirectly on difficulties in vocabulary learning for all of the participants. First, as for the problems directly caused by the student's own disabilities, the participants mentioned their emotional problems, lower capacity to pay attention inside and outside the class, and deficiencies in their language learning skills and English abilities. Additionally, the emotional problem was emphasized by Haines & Torgesen (1979) that the low ability to memorize information decreases motivation and mental efforts. In other words, LD students might think that if they cannot achieve a task or believe that completion is not necessary, they will not even try. However, when these students are assigned tasks, they either do not know how to manage to finish the tasks orderly, or they might be "unaware" that they need to use their memory as strategy to learn new words (Smith, 2004, p.109). It might not be wrong to state that the unawareness on using different learning strategies to different types of tasks caused the participants less mature than their classmates in the uses of learning strategies (Smith, 2004). Including, but not limited to the problems caused by their characteristics, participants' problems with vocabulary learning seemed to also stem from contextual issues including the

number of students in the classroom, which affected their motivation to focus on what was being taught. Finally, another unavoidable problem, which generally affects both LD and Non-LD students, is the difficulty of the English language itself. As claimed by most of the participants, they struggled with not knowing the right word choices, word classes and grammatical functions of verb forms.

Conclusion

Conclusion on the vocabulary size and competency of the LD students

According to the interpretation set by Nation, the satisfactory vocabulary size that the test taker should gain is at least 27 out of 30 points. The participants gained the highest score of 25 and the lowest score of 6, which means none of participants reached the satisfactory level. However, one participant, who got 25 out of 30, almost reached the satisfied level. Moreover, the mean score of this test was at 15.14, and there were 4 participants gained higher score then the mean score. As for the Nation's nine aspects of vocabulary competency, the participants seemed to possess the highest competency in the productive spoken aspect of English vocabulary, while they seemed to have to the lowest or no competency at all of the productive form and meaning of English vocabulary.(Nation 2001)

Conclusion on the frequency of vocabulary learning strategies

The most and the least frequent learning strategies used by participants are reported separately in relation to the strategies used in each learning stage. Firstly, in the stage of encountering new words, most of participants decided to 'ask teacher for synonym of new words' and hardly decided to use a monolingual dictionary. Secondly, when the participants had to consolidate the words they learned, they often take notes in class, but they rarely use mind-mapping. Lastly, the most outstanding strategy is that they often attended English-medium classes or those led by a native speaker to expand their vocabulary competency.

Conclusion on the perceptions of problems with vocabulary learning

A set of questions was implemented to find out problems with vocabulary learning amongst the participants through situations inside and outside the classroom when they found new vocabulary; consolidating the words, and expanding vocabulary competency. The answers show three major problems that were mentioned by participants including (1) problems in relation to the students' own disabilities, which result from the characteristics of learning disabilities participants themselves, (2) problems from contextual issues which were the atmosphere and people surrounding them, and (3) the characteristics of the English language.

For the participants' own disabilities, when they were asked questions relating to their behavior and actions in vocabulary learning, they stated directly to the point that problems with learning in class were from their difficulty in paying attention. Moreover, the lack of self-esteem was mentioned by the participants when they found new words that they did not know. This problem led to another problem, which was emotional problem, as they reportedly would find the meaning only when they wanted to do so. Problems linked to the students' emotion were also addressed when participants discussed what to do to remember

and retain words they learned; because they did not have motivation, so they did not see any point to remember the words.

Moreover, there are contextual issues, which were mentioned mainly when they were asked questions about in-class learning. These difficulties were from their attitudes towards the teachers, both Thai and native English teachers. Most of them stated that it was important for them that the teachers understand their conditions as they were slow learners. The other external problems were class size and classmates. The participants told the researcher that they were distracted easily when the class was too big, and they were uncomfortable to ask their classmates because they might not get the correct meaning.

Lastly, characteristics of the English language also lend themselves to LD students' problems with vocabulary learning as they don't know word class in English or the correct word choice that they had to choose. Furthermore, the English language requires language user to follow the grammar rules such as changing form of verb when tenses change, requiring participants to memorize more input. However, it might not be fair to say that problems related to the nature of English language specifically prevent LD students from mastering the language since each language normally contains particular structure or language rules that users have to abide by. It is simply that the LD students in the target setting seemed to find it hard to cope with the rules of English.

Implications and Recommendations for further studies

Although many schools provide an extra curriculum for students with learning disabilities, it does not mean there is higher attention paid to the group of LD students. To create a proper curriculum for LD students, Mercer and Mercer (1997) mentioned the concept of the least restrictive environment (LRE): "the child should be educated in the least restrictive environment in which his educational and related needs can be satisfactorily provided".

For the pedagogical implication, teachers should consider appropriate environmental arrangements, instructional materials and equipment, and scheduling to maximize LD students' learning. A teacher who understands LD students' characteristics increases students' motivation to apply what they have learned. Also, an important concept of benefit to the LD students is the idea of mainstreaming and integrating LD students with the non-disable students through both coordination classroom and special education teachers (S. Bos and Vaughn, 1998). This will enhance the comprehensive atmosphere socially and instructionally among the students, especially with a teacher who is a special education teacher as a collaborator. (Mercer and Mercer, 1997)

References

Alley, G. R., Deshler, D. D., Clark, F. L., Schumaker, J. B., & Warner, M. M. (1983). Learning disabilities in adolescent and adult populations: Research implications (Part II). *Focus on Exceptional Children, 15*, 1-14.

Bender, W. (1998). *Learning disabilities: Characteristics, identification, and teaching strategies* (3rd ed.). Boston: Allyn and Bacon.

Bos, C., & Vaughn, S. (1998). *Strategies for teaching students with learning and behavior problems* (4th ed.). Boston: Allyn and Bacon.

Catalan, R. (2003). Sex differences in L2 vocabulary learning strategies. *International Journal of Applied Linguistics, 13*(1), 54-77.

Dörnyei, Z. (2003). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford: Oxford University Press.

Fan, Y. M. (2003). Frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies: A study of Hong Kong learners. *The Modern Language Journal, 87*(2), 222-241.

Haines, D. J., & Torgesen, J. K. (1979). The effects of incentives on rehearsal and short-term memory in children with reading problems. *Learning Disability Quarterly, 2*(2), 48-55.

Intaraprasert, C. (2004). *ETS students and vocabulary learning strategies: A preliminary investigation.* Unpublished Research, Suranaree University of Technology, Nakhon Ratchasima, Thailand.

Liangpanit, C. (2002). *Supplementary exercises of vocabulary in news section in student weekly*. Master of Arts Independent Study in English, Graduate School, Khon Kaen University.

Mercer, C., & Mercer, A. (1997). *Students with learning disabilitie*s (5th ed.). Upper Saddle River, N.J.: Merrill.

Mongkol, N. (2008). *A study of vocabulary learning strategies of the first and second year students from English Department at Phetchaburi Rajabhat University*. Master of Arts Thesis in English for Specific Purposes, Graduate School, Kasetsart University.

Muensorn A. (2007). *Study of vocabulary learning strategies used by the Bangkok Metropolitan Administration (BMA) Primary School Students*. Unpublished Master's thesis, King Mongkut's University of Technology Thonburi, Bangkok, Thailand.

Nation, I. S. P. (2001). *Learning vocabulary in another language.* Cambridge University Press.

Nation, P. (June 2015). Retrieved from http://www.victoria.ac.nz/lals/about/staff/paul-nation

Nomsiri, W. (2005). *Needs of business administration students for Business English reading course*. Master of Arts Independent Study in English, Graduate School, Khon Kaen University.

Oxford, R. (1990). *Language learning strategies: What every teacher should know*. Boston: Heinle & Heinle.

Petchnuy O. (2013). *A study on the reading ability of English words through sight word approach with picture me reading method in grade 3 students with learning disabilities.* Master thesis. M.Ed. (Special Education), Graduate School, Srinakharinwirot Uniersity, Bangkok, Thailand.

REED Institute. Special Education Bangkok, Thailand. (July 4, 2015). Retrieved from http://reed-institute.com/

Schmitt, N. (1997). Vocabulary learning strategies. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description acquisition and pedagogy* (pp. 199-228). Cambridge: Cambridge University Press.

Smith, C. (2004). *Learning disabilities: The interaction of students, and their environments* (5th ed.). Boston: Allyn and Bacon.

Teeraladanon S. (2013). *A Study on developing the ability to read and write Thai words with non-consistent final sound – final consonant letters in children with learning disabilities in grade 3 through Herbart format step in combination with copy cover compare technique*. Master thesis. M.Ed. (Special Education), Graduate School, Srinakharinwirot University, Bangkok, Thailand.

Wongsiri, A. (2012). *Vocabulary learning strategies used by the first year Thai undergraduate students of the Bachelor of Economics International Program at Thammasat University*. MA. Independent Study, Language Institute Thammasat University.

Appendices
Appendix A

Vocabulary Size Test (2000 word level) แบบทดสอบวัดระดับคำศัพท์ (2000 คำ)

คำสั่ง : จับคู่คำศัพท์ภาษาอังกฤษและความหมายภาษาไทยที่ถูกต้อง

ตัวอย่าง

1. green
2. cinema   _____4_____ บ้าน
3. fridge   _____1_____ สีเขียว
4. home   _____5_____ รถไฟ
5. train
6. red

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1. coffee
2. disease ……….. ค่าจ้าง
3. justice ……….. กระโปรง
4. skirt ……….. ความยุติธรรม
5. stage
6. wage

1. adopt
2. climb ……….. ปีน
3. examine ……….. ตรวจตรา
4. pour ……….. ล้อมรอบ
5. satisfy
6. surround

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1. choice
2. crop ……….. อุณหภูมิ
3. flesh ……….. เนื้อ
4. salary ……….. เงินเดือน
5. secret
6. temperature

1. bake
2. connect ……….. เชื่อมต่อ
3. inquire ……….. เดินเตร็ดเตร่
4. limit ……….. จำกัด
5. recognize
6. wander

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1. cap
2. education ……….. การศึกษา
3. journey ……….. ตราชั่ง
4. parent ……….. การเดินทาง
5. scale

1. burst
2. concern ……….. ระเบิด
3. deliver ……….. ทำให้ดีขึ้น
4. fold ……….. เอาของไปส่ง
5. improve

6.	trick		6.	urge	
1.	attack		1.	original	
2.	charm	……….. ทรัพย์สมบัติ	2.	private	……….. ดั้งเดิม
3.	lack	……….. เสน่ห์	3.	royal	……….. ส่วนตัว
4.	pen	……….. ขาดแคลน	4.	slow	……….. ยอดรวม
5.	shadow		5.	sorry	
6.	treasure		6.	total	
1.	cream		1.	ancient	
2.	factory	……….. เล็บ	2.	curious	……….. ยาก
3.	nail	……….. ความร่ำรวย	3.	difficult	……….. โบราณ
4.	pupil	……….. นักเรียน	4.	entire	……….. ศักดิ์สิทธิ์
5.	sacrifice		5.	holy	
6.	wealth		6.	social	

Adapted from Nation (2001) the vocabulary level test, 2000 word level, specially made for Thai speakers.

Appendix B
Vocabulary Competency Test

แบบทดสอบวัดความรู้คำศัพท์

กระดาษคำตอบ

(Answer sheet)

1 ฟังคำต่อไปนี้และเขียนความหมายภาษาไทย

(Please write Thai meaning of the word you hear)

  1.1   …………………………

  1.2   …………………………

  1.3   …………………………

2 จงอ่านออกเสียงคำต่อไปนี้ (Please say these written words)

  2.1   show

  2.2   slightly

  2.3   meter

3 จงอ่านออกเสียงประโยคคำต่อไปนี้ (Please read these sentences aloud)

  3.1   The report is very good.

  3.2   They lift the box up.

  3.3   The symbol is pretty.

4 จงเขียนคำที่นักเรียนได้ยิน (Please write down the words you hear)

  4.1   ………………….

  4.2   ………………….

  4.3   ………………….

5 จงแยกคำต่อไปนี้ออกเป็นส่วน (Break the words into parts.)

  เช่น building   =   build   +   ing

  5.1   presenter   =   …………   +   …………

  5.2   apparently   =   …………   +   …………

  5.3   citation   =   …………   +   …………

6 จงตอบคำถามต่อไปนี้ โดยตอบเพียง 1 คำ (Please answer the questions in one word.)

  6.1   What do you call a person or things that play?   p………………..

  6.2   What is the adjective form of the word 'danger'?   d………………..

  6.3   What do you call a person who buys thing?   b………………..

7 จงเติมความหมายภาษาไทยที่ถูกต้องของคำต่อไปนี้ (Please write Thai meaning of these words)

  7.1   history   แปลว่า   …………………………

  7.2   pack   แปลว่า   …………………………

       7.3   dialog   แปลว่า   …………………………

8   จงเติมคำภาษาอังกฤษให้มีความหมายตรงกับคำต่อไปนี้ (Please put the correct English words.)

    8.1 แข็งแรง   …………………………...

        ความแข็งแรง   …………………………...

    8.2 คร่าวๆ   …………………………...

        อย่างคร่าวๆ   …………………………...

    8.3 ง่าย   …………………………...

        ความง่าย   …………………………...

9   จงเติมความหมายที่ถูกต้องของคำที่ขีดเส้นใต้ในประโยคต่อไปนี้เป็นภาษาไทย (Please write Thai meaning of the underlined words.)

    9.1   The boys <u>approach</u> to the girls they like. …………………………...

    9.2   This building needs to have more air <u>flow</u>. …………………………...

    9.3   This is the <u>remote</u> area far from the town. …………………………...

10   จงเติมคำภาษาอังกฤษที่มีความหมายตรงกับคำที่ขีดเส้นใต้ในประโยคต่อไปนี้ (Please write synonym of the underlined word in each sentence)

    10.1 เขาตกแต่งร้านด้วยสีแดงเพื่อให้เป็น<u>จุดสนใจ</u>ของคนที่เดินผ่านไปมา

        …………………………...…………………………...………………

    10.2 สีม่วงเกิดจาก<u>การรวมกัน</u>ระหว่างสีแดงและสีน้ำเงิน

        …………………………...…………………………...………………

    10.3 แม่กำลังทำอาหาร<u>ในขณะที่</u>ฉันกำลังทำการบ้าน

        …………………………...…………………………...………………

11   จงเลือกคำที่นักเรียนคิดว่าเกี่ยวข้องกับคำต่อไปนี้ (Which word is related to the given words?)

    11.1   talk   consider   ………………

          a. play   b. rule   c. discuss

    11.2   labor   salary   ………………

          a. employment   b. habit   c. interaction

    11.3   formation   framework   ………………

          a. composition   b. establishment   c. intervention

12   ให้นักเรียนคิดคำจำนวน 3 คำ ที่เกี่ยวข้องกับคำต่อไปนี้ (Please add three words relating to each given word)

    12.1 Family   …………………………...…………………………...………………

    12.2 Transport …………………………...…………………………...………………

    12.3 Pink   …………………………...…………………………...………………

13. จงเลือกคำตอบที่ถูกต้อง (Please choose the correct answer)

13.1   Students _____ for the football game last year.

a. playing   b. plays   c. played

13.2   The first _____ is the good start.

a. impressive   b. impression   c. impressing

13.3   The price was _____ set for the new collection.

a. reasoning   b. reasonably   c. reasonable

14. จงแก้ไขคำที่ขีดเส้นใต้ให้ถูกต้องตามหลักไวยกรณ์ (Please correct the underlined word)

14.1   Sky train is used as the <u>linked</u> (_____) between two cities.

14.2   Mother gives money to her children <u>equal</u> (_____).

14.3   She <u>cough</u> (_____) a lot yesterday.

15. จงเลือกประโยคที่ถูกต้อง (Please choose the correct sentence.)

15.1   a. They always look beyond the sea.

b. They always watch beyond the sea.

c. They always stare beyond the sea.

15.2   a. The sky is bright yellow when the sun is rising.

b. The sky is heavy yellow when the sun is rising.

c. The sky is healthy yellow when the sun is rising.

15.3   a. Joe got tooth decay when he was six.

b. Joe got tooth ruins when he was six.

c. Joe got tooth collapse when he was six.

16. จงเติมคำที่เหมาะสมในประโยคต่อไปนี้ (Please fill in the blanks with the correct words)

16.1   Captain must learn how to fly the _____.

16.2   After dinner I have to _____ the dishes.

16.3   The police _____ prisoners who has done

community service for more than 2 years.

17. นักเรียนคิดว่าคำต่อไปนี้เป็นคำประเภทใด (Please choose the correct type for each word)

17.1   professional
a. คำที่พบได้ทั่วไป   b. คำที่ใช้กันไม่บ่อย   c. คำทางการ

17.2   swing
a. คำที่พบได้ทั่วไป   b. คำที่ใช้กันไม่บ่อย   c. คำทางการ

17.3   sweep
a. คำที่พบได้ทั่วไป   b. คำที่ใช้กันไม่บ่อย   c. คำทางการ

18. จงเลือกคำที่ใช้แทนคำต่อไปนี้ (Please choose the correct word.)

    18.1   The government___asked foreigners to show their ID card.

        a. gentleman   b. personnel   c. agent

    18.2   This area has very good _____to build the house.

        a. landscape   b. boot   c. floor

    18.3   The graph shows the_____ changes of product selling.

        a. strong   b. comfortable   c. remarkable

Appendix C
Vocabulary Learning Strategies

<u>Part 1: General Information</u>
Please choose your class level

Gender

  o   Male   o   Female

<u>Part 2 : Questionnaires</u>
Please put and 'X' in each box that describes how often you use strategies when you learn vocabulary.

Always   means I always use this strategies when I learn vocabulary.
Often   means I often use this strategies when I learn vocabulary.
Sometimes means I sometimes use this strategies when I learn vocabulary.
Rarely   means I rarely use this strategies when I learn vocabulary.
Never   means I never use this strategies when I learn vocabulary.

When I learn vocabulary, I will……….	Always	Often	Sometimes	Rarely	Never
Strategies for encountering a new word					
1. Analyze part of speech o of the word s in sentences to determine the word's meaning.					
2. Analyze prefixes, suffixes and roots of words to determine the word's meaning.					
3. Analyze any available pictures or gestures from paragraph to determine the word's meaning.					
4. Guess the word's meaning from contextual context in reading.					
5. Use bilingual dictionary.					
6. Use monolingual dictionary.					
7. Ask teacher to translate to Thai.					
When I learn vocabulary, I will……….					
8. Ask teacher for paraphrasing new word.					
9. Ask teacher for synonym of new word.					
10. Ask teacher for a sentence including the new word.					
11. Ask classmate for meaning.					
12. Discover new meaning through group work activity.					

Strategies for consolidating a word once it has been encountered					
Study and practice the new word in group	Always	Often	Sometimes	Rarely	Never
Image word's meaning.					
Connect the word to personal experience.					
Connect the word to its synonym and antonym.					
Study the spelling of the word.					
Study the sound of the word.					
Do verbal repetition					
Do written repetition					
Use mind mapping					
Do word lists					
When I learn vocabulary, I will……….					
Take not in class					
Use flash cards					
Put English label on physical objects					
Strategies for expanding vocabulary knowledge					
Read different types of English printed material, such as newspapers, pocket books.					
Attend English - medium classes					
Access English – medium website (Academic website)					
Access English – medium website (Any interested website)					
Interact with English speakers.					
Play English-medium games					
Watch English TV program, English-speaking film or listen to English music					

Appendix D
Interview Guide

Date of interview_____
Interviewee's information
Interviewee _____Gender:_____
Age: _____Learning disabilities information:_____

Objective of the interview
To explore the LD students' problems with vocabulary learning
Types of questions

Introduction
1.   Tell me your general opinion towards studying in this school.
2.   What subject do you like the most?
3.   Have you found any difficulties studying at the school? If yes, What are they?

English Class
4.   Tell me about your English class, for example what you like or what you do not like, why?
5.   In English class, what activities would you like to do?
6.   What English skill do you find the hardest for you? Why? (Reading, listening, writing, speaking)

Vocabulary Learning
Encountering a new word
7.   In your daily life, while you are reading, listening, writing or speaking when is the most often you find yourself not knowing the vocabulary?
8.   From your experience, how do you cope with an unknown word?
9.   Tell me about people who have most helped you to find the word meanings. How did they help you?
10.   In class, if you are reading a paragraph from your textbook and find an unknown word, what would you do?
11.   If you get a chance to do group activities in class, whom would you ask to explain the unknown word? (For example, teacher; classmate or do not ask)
12.   How do person from previous question help you?

   Consolidating vocabulary encountered
13.   What was your feeling when your friend can remember the new word, but you cannot?
        •   How will you handle on this?
14.   In what way do you retain vocabulary memory?
15.   How do you plan to retain vocabulary memory after you can memorize the words? (MET)
        •   Explain your plan in steps or method to help having long-term memory.

Expanding Vocabulary Knowledge

16.   Please explain how you expand your vocabulary.
17.   Please choose between watching movies and listening to songs in English and explain the reasons.
18.   Have you learned new words or gain more vocabulary knowledge from watching movies and listening to songs in English? How?
19.   Do you think English class taught by English native speaking teachers can help you expanding vocabulary knowledge? How?

Closing Interview
20.   What would you consider to be your strengths or weaknesses on learning vocabulary?
21.   What would be your advices to the nest year LD students, who are going to start grade 12, to be success on vocabulary learning.