



EFFECTIVENESS OF POWERPOINT PRESENTATION ON VOCABULARY RETENTION OF EFL FIRST-YEAR STUDENTS' READING COMPREHENSION

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Abstract:

Vocabulary learning plays an important role in language learning. To many language learners, lack of vocabulary is one of the biggest obstacles that prevent them from mastering the language. Moreover, there have been a lot of studies conducted to find out the way to help language learners acquire and retain learned vocabulary. Among them, PowerPoint is suggested by many researchers as one good way to help learners learn vocabulary retention through reading comprehension. The purpose of this study was to investigate the effect of PowerPoint on vocabulary retention in reading comprehension of EFL (English as a Foreign Language) first-year students at Long An University of Economics and Industry (DLA), Long An Province, Vietnam. Besides, this study investigates learners' attitudes towards the use of PowerPoint in learning vocabulary. The participants were 60 non-English major students at DLA. Two instruments were (1) the tests on English vocabulary, (2) the questionnaire on the participants' attitudes towards the use of PowerPoint in teaching and learning vocabulary, were investigated. The results demonstrated a significant difference in learners' vocabulary retention: the participants in the experimental group remembered vocabulary longer than those in the control group. The study showed

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that the learners had positive attitudes towards the use of PPT (PowerPoint Presentation) in learning vocabulary retention.

Keywords: EFL students, vocabulary retention, PPT, reading comprehension, Long An University of Economics and Industry

1. Introduction

Nowadays English plays an important role in our life. It is important not only in our country's development but also in the process of regional and world integration as well. That is why English has become one of the 'main' subjects being taught at schools, university and learning English is now considered to be an important goal for students to achieve. When learning English, students not only have to learn all four skills: listening, speaking, reading, and writing but also have to learn vocabularies and grammatical structures. Vocabulary knowledge is a prerequisite for a student's success in mastering a second language in general, and English in particular. This is because vocabulary is integral to every language skill, including reading, writing, listening, and speaking skills.

Nevertheless, students always find that the number of new words they have to learn is large. They usually forget the words that they have learned after some days or even right after they have been taught. The shortage of vocabulary leads to many difficulties in foreign language learning.

There is little evidence that students can acquire vocabulary from reading (Schmitt, 2000). Reading is considered as an essential skill for students to find the information and materials for their studying. Moreover, the students think reading classes boring when they must spend much time looking up new words in the dictionary. Because of the importance of vocabulary in language learning, many studies were conducted to find out effective ways which help students learn new words and keep those words in long-term memory. In one research of English teachers in Vietnam, Le, P. L., & Nguyen, H. N. (2007) showed that the teacher usually reads the reading passage quickly, then writes some difficult words on the board and just explains the meanings with Vietnamese equivalents and asks the students to take notes. Furthermore, the teacher spent most of the time for teaching grammar, not vocabulary.

In recent years, the use of PowerPoint (a form of multimedia) presentations in classroom instruction has significantly increased globally (Nouri & Sharid, 2005). Moreover, more teachers apply PowerPoint (PPT) in learning vocabulary. Rickman (2000) stated that *"PowerPoint has been used as a teaching tool in the classroom with the presumption that students expect teachers to offer more PPT-enhanced lessons and that teachers will find using PPT helps to facilitate teaching and learning processes"*. However, not many teachers have known how to make the best of this newly-employed teaching tool. *"Since the innovation of updated teaching approaches came into being, there have been many more lessons conducted with communication and teacher-student interaction considerably enhanced, which*

satisfies the educators. However, the reality is completely different from that assumption. Some English teachers, from secondary to high schools, use the new teaching method only when the lessons are observed by other teachers. As for other classes, the traditional method is applied as usual" (Le, P. L., & Nguyen, H. N., 2007).

In addition, in terms of students' attitudes, the rapid growth of PPT implementation in educational settings does not guarantee acceptance on the part of students. Negative attitudes towards PPT-based instruction could be a deterrent to the use of PPT as a tool for language learning. It seems necessary to let the students have their say over the effectiveness of PPT use because they are directly affected by the lesson. Lowry (1999) also agrees that it is always worth obtaining student feedback on the impact of PPT on their learning. In the field of research in Vietnam, there have been very few Master's theses conducted in the field of IT applications in high school. For example, Nguyen (2008) investigates classroom interaction in PowerPoint EFL classes in Binh Dinh province. Besides, there are no Master's theses conducted in the field of PPT applications in teaching vocabulary in reading comprehension at the university.

In conclusion, through this study, the researchers try to find out how effective it is when the students learn vocabulary retention with PPT Presentation while studying English reading comprehension.

1.1. Problem statement

The vocabulary is very important in studying foreign languages in general and English in particular. If students are lack of vocabulary, they cannot speak, read, write, and listen in English. Therefore, vocabulary is necessary for learning progress. Schmitt (2000) said that learning vocabulary is an essential part of language mastery. It is noteworthy that there are many reports of a strong relationship between reading comprehension and vocabulary (e.g. Grabe, 2004; Baumann, 2005; Kieffer and Lesaux, 2007). Besides, reading is an important skill for students who want to find the information for their studying. Swanborn (1999) stated that *"vocabulary learning is a by-product of reading."*

Furthermore, many teachers in high school and university teach vocabulary in traditional methods. First, they read out the passage, and then wrote some difficult words on the board, after that they explained the meaning with Vietnamese equivalent, and finally, the students took notes. Although it saves time but the students usually forget the words after some days. Facing this situation, many teachers want to find ways of changing the method of teaching and learning vocabulary. Therefore, the researchers conducted a research to find the answer to help the learner, EFL students, learn more vocabulary in reading comprehension effectively. PPT can help learners in vocabulary retention and reading comprehension. Also, PPT can help readers understand the meaning of the new words and retain them for a long time.

As English teachers, the researchers want to clarify the topic here with my knowledge and my supervisor's guidance to analyse, and understand the situation of teaching and learning vocabulary at DLA, Vietnam; the application of PPT in learning vocabulary retention. Thank to it, I will find out lessons, and experience for myself and

make a small contribution to enhance the effectiveness in teaching this subject. Therefore, this study will investigate the effectiveness of PPT on the retention of vocabulary in reading comprehension of the EFL first-year students at Long An University of Economics and Industry.

2. Literature review

2.1 PowerPoint as a Multimedia Teaching

Computers are now so commonplace in the advanced countries of the world that their absence is more remarkable than their presence. Together with the appearance of computers, the emergence of multimedia tools in language teaching has attracted the attention of teachers, educationalists, and experts.

The application of multimedia tools can foster this goal by creating *"a learning environment wherein students practice their language skills and acquire target culture"* (Brauer, 2001, p.130). Brinton (2001) believed that multimedia is an important tool in the language teaching process because *"media materials can lend authenticity to the classroom situation, reinforcing for students the direct relation between the language classroom and the outside world."* (p.461). He also stated that *"whatever the approach, language teachers seem to agree that media can and do enhance language teaching"* (Brinton, 2001, p.459).

Moreover, multimedia components from text, images, sounds, and videos can help enhance vocabulary acquisition. Beatty (2005, p.25) stated that *"multimedia usually refers to many of the same ideas associated with hypermedia, but hypermedia might only make use of two types of media (e.g. text plus sound or text plus photographs)"*.

2.2 What PowerPoint (PPT) is

PowerPoint is a tool of teaching that motivates students in their learning. Moreover, Jones (2003) defined PowerPoint (Microsoft Corp.) as a widely used presentation program that originated in the world of business but has now become commonplace in the world of educational technology. PowerPoint can be as simple as having only text on a colored screen. Presentations can also be complex with tables, pictures, graphs, sound effects, visual effects, video clips, etc. Al-Toutbat (2006) defined PPT as a software package that includes word processing, images, video clips, and sound. In addition, Roblyer (2006) stated that PPT is a type of presentation software designed to program electronic presentations with text, graphics, and movement of slides. Furthermore, PowerPoint presentations create memorable presentations and give more opportunities to engage modern information (Stein, 2006).

According to Loisel and Galer (2004), PowerPoint is a *"great tool because it allows for a smooth presentation filled with more than just words. PowerPoint has numerous capabilities such as different colors and backgrounds for each slide, many sound effects and motion abilities, and multiple pictures with animation capacities. Each of these techniques grabs the audience's attention and is more memorable than just a simple lecture"* (p.5).

Wendy Russell (2014) stated that the term "PowerPoint presentation" was coined when Microsoft introduced its software program PowerPoint. PowerPoint is commonly used by presenters as a digital aid when presenting their topic to an audience. Microsoft has called this type of software a "presentation", which is a misnomer. Many presenters often forget that they are the presentation that the audience came to see, not their PowerPoint presentation. PowerPoint is probably the most used (and misused) presentation software program. Microsoft estimates that over 30 million PowerPoint presentations are given daily around the globe.

2.3 PPT enhancing lessons vs. traditional lessons

In this study, PPT lessons are designed to include multimedia such as projector, sound, and pictures while traditional lessons are defined as textbook, chalk, and blackboard. In Bushong's 1998 study, he stated that PPT should be an enhancement of the instructional process, not the determining factor for student success. Iwanski (2000) also mentioned the term "*computer-enhanced instruction*" (CEI) in his study. He believed that the use of computers to enhance or enrich instruction in lectures or demonstrations.

2.4 Advantages of using PPT in teaching and learning

Many researchers have investigated the advantages of using PPT in education. Most of the researchers found that PPT could facilitate student comprehension of lesson materials, encourage classroom interaction, heighten student interest, provide structure and organization to a lesson, and help teachers with their teaching because of its ease of refining and reuse. Firstly, PPT helps the teacher structure and organize the lesson easily. Moody (1998) stated that PPT is an effective tool to combine text and images and help students remember concepts better. In addition, PPT also "*provides encouragement and support to staff by facilitating the structuring of a presentation in a professional manner*" (Jones, 2003, p.45). Secondly, using PPT teachers spend less time writing on the board and spend more time on classroom discussion (Wilmoth & Wybraniec, 1998). According to Mantei (2000), PPT is a more efficient time management strategy than writing on a board or using transparencies. As a result, students' talking time is increased (Moody, 1998; Lowry, 1999) and teachers have a lot of time for students to practice.

Another advantage of PPT is to increase student interest. PPT can make the lesson more enjoyable and interesting with colorful slides and sound (Wilmoth & Wybraniec, 1998). Jones (2003) believed that "*a presentation can appeal to a number of different learning styles and be made more stimulating*". Wang (2005) pointed out that language teaching and learning using modern teaching equipment such as PPT can help teachers create a pleasant, lively, and interesting atmosphere for students. However, PPT has many features that teachers can exploit to help students learn effectively. Besides the advantages, PPT might have problems that the teacher needs to be aware of in order to use it effectively.

2.5 Enhancement of presentation with multimedia

Multimedia is a computer application that uses more than one medium (texts, graphs, motion video, still video, animation, and sound) to deliver information (Iwanski, 2000). Multimedia enables teachers to change teaching and presentation methods. Avgerinou and Ericson (1997, p.287) claimed *"the way we learn bears a strong relationship to the way our senses operate.... [and].... a very high proportion of all sensory learning is visual."* Also, according to Wong and Cheung (2003), *"we learn 83% through the sense of sight, 10% through the sense of hearing and the remainder through the sense of smell, touch and taste"*. This means that visual and audio are important for the learners. In addition, Wong and Cheung (2003) stressed *"visuals that are well designed can also help motivate students to learn by attracting and maintaining their attention.... [and] meet their needs of those students who learn better through visual means"*.

2.6 Students' positive attitudes towards PPT applications

Positive attitudes help students study well and get good marks in their learning. Some research findings showed that students had positive attitudes towards PPT-enhanced lessons prepared by teachers in the classroom. Attitudes towards PowerPoint impact on cognitive learning. Some studies confirmed that students perceived PPT to be useful for their learning. In Wilmoth & Wybraniec (1998) study, students reported that PPT assist them in comprehending the material with examples and definitions and they found that seeing the graphs helped explain difficult concepts. Moreover, in Chang (2005) study, most of the participants believed that PPT in the classroom enhanced learning and helped them overcome difficulty in English. According to Crawley & Frey (2008), students responded positively to PPT as an enhancement for lessons.

The effects of PPT on classroom interactions were viewed as more favorable than in a traditional lecture. PPT offers the ability to get students involved in the lessons. Wilmoth & Wybraniec (1998) stated that students in Social Statistics Courses, taught both with and without PPT in subsequent semesters, stated that the PPT presentation increased their understanding of the material because the professor spent more time for discussion and less time writing on the board. Chang (2005) showed that PPT helped students stay awake, and focus on the lectures, and the key points were in the textbooks. Students also reported that PPT held their attention during the lectures (Crawley & Frey, 2008). Further evidence comes from Clark's (2008) study, where 46 history students took part in a survey about the elements that could help to maintain student interest. The findings revealed that 89,13% of students reported that they believed PPT aided their learning and increased their interest. She considered that the key element in the use of PPT as a presentation tool was its potential to increase and maintain student interest and attention to the lesson, which occurs when PPT is combined with active teaching and student involvement by focusing on their learning as an active exercise.

Other studies showed that educational technology in classroom presentations promoted a favorable attitude towards the teacher, Atkins-Sayre et al. (1998) believed that PowerPoint enhanced a teacher's delivery, and more importantly, his/her credibility.

Also, Apperson et al (2006) showed that if students report that they find presentation graphics to be more interesting and attention-capturing, it is reasonable that they also may find the teacher to be more competent and more engaging. In this study, many students said they would like to learn and take another class from the teacher who used PowerPoints.

Several studies suggested that students believe PPT-enhanced lectures are better structured, clearer, and more organized (Atkins-Sayre et al., 1998; Frey & Birnbaum, 2002; Susskind, 2005; Schut, 2005). Lowry (1999) showed that among 86 respondents, 76 students rated the course "very good", and 10 "good." The majority of the comments positively remarked on the clarity of both the material and the structure. In fact, students liked PPT presentations because they were organized and easy to read (Wilmoth & Wybraniec, 1998). In Moody (1998), 100% of students in his study agreed that they preferred PPT presentations to the use of the chalkboard. In addition, participants in Yancy (2006) when they were asked to explain which technologies, they had hoped to learn more about in the public speaking class, considered PPT as a tool required for their future success in professional fields and academia. In extra studies, the findings showed positive attitudes toward the students. However, some studies showed that students complained about their teacher's speed of delivery, inappropriate designs, teacher's lack of PPT training, and classroom interaction deterrence. Nowaczyk et al. (1998) said that students with lower test grades felt that the pace of presentations was too fast. Furthermore, most of the participants (100/145) in Nguyen (2008, p.61) showed that slides could be challenging to English learning in high school EFL classes because they found the teacher "*went through the slides too quickly for good understanding*" (see also Rickman & Grudzinski, 2000; Chang, 2005).

The students in Nguyen (2008) also complained that they were misled by the beautiful pictures and colorful effects. Nguyen also noted that in some cases, PPT slides could be counter-effective and distracting as students kept discussing the slide pictures and did not pay adequate attention to what they were required to do by teachers. In addition, students disliked PPT when teachers put too much information on one slide or showed poorly designed slides (Chang, 2005).

2.7 Vocabulary

Vocabulary is one of the general components, which have to be mastered well by the students in learning English. Vocabulary is defined as "*the collection of words that an individual knows*" (Phillips, 1993). If the students do not know vocabulary, they will have difficulties in using English. Hornby (1986: p.462) stated that vocabulary is: (1) the total number of words, which (with rules for combining them) make up the language, (2) (range of) words known to or used by a person in trade, profession, etc.

Vocabulary is very important in teaching and learning English. It is valuable in understanding oral and written communication. Al-Jarf (2006, p.87) stated that "*vocabulary knowledge is an important element in second language acquisition. By learning new words, students can increase their listening, speaking, reading, and writing vocabularies and can*

improve comprehension and production in the target language". Moreover, vocabularies are the building blocks of a language without which people cannot communicate their intentions and thus, the need for vocabulary is an issue of consensus among teachers and learners (Allen, 1983).

The term "vocabulary" refers to the words that are known by students and can be effectively used to communicate. Knowing a word involves more than its literal definition, it includes its relationship to other words, connotations in different contexts, and its power of transformation into various other forms through morphemes such as prefixes, suffixes, and root words (Kieffer and Lesaux, 2007). Finocchiaro explains that students' vocabulary can be divided into two kinds, they are "active and passive vocabulary" (1974, p.73). Active vocabulary consists of words that students understand and can pronounce correctly in speaking and writing. While passive vocabulary consists of words those students recognize and understand when they occur in a context and they never use them in communication. They understand them when they hear or read them, but they do not use them in speaking and writing.

2.7.1 Teaching vocabulary to EFL students

Vocabulary is one element that links the four skills of listening, speaking, reading, and writing all together. A teacher has to select the suitable words to be taught to the students.

Haycraft (1978: pp. 44-45) suggests some guidelines on which the choice of vocabulary can be based in the following:

- 1) *The most common word*: it is important to choose the words that are commonly used. It will be easy for students to understand and to memorize.
- 2) *Students' needs*: If the students want to know a certain word, the teacher has usually taught it because motivation will help them to remember it.
- 3) *Students' language*: If the students are from one language group, knowledge of their language can be very helpful. The words that are similar in their language and English will be easily learned.
- 4) *Word building*: It is often useful to choose a word because a general rule can be transformed, for example: work-worker, direct-director, possible-impossible, etc.
- 5) *Cross-reference*: A lot of words apply to different situations or specifications. For instance, if the teacher wants to explain the word "car", it is worth having words that are common to other means of transportation, such as bicycle, train, airplane, bus, etc.
- 6) *Related structure*: Many structures have their own vocabulary, if the teacher is going to teach a word, he will introduce vocabulary connected with the word.
- 7) *Stated in the classroom*: The vocabulary discussed among the students (in the classroom) should be taken from and related to the list of vocabulary advised by the curriculum. However, it should be noted that the words selected by the teacher make students become enthusiastic in teaching teaching-learning process.

Finocchiaro (1974, pp.73-74) suggests several commands related to the teaching of vocabulary. They are:

- 1) Vocabulary should be taught in normal speech utterances,
- 2) New vocabulary items should always be introduced in known structures,
- 3) Whenever possible, the vocabulary item should be centered on one topic,
- 4) Whenever a familiar word is met in a new context, it should be taught and practiced,
- 5) Vocabulary items should be taught in the same way we teach everything else. We give our students an understanding of the meaning in many ways; dramatize, show pictures, paraphrase, etc.,
- 6) Vocabulary should be practiced as structures are practiced substitution drills, transformation drills, question and answer, etc.

When teachers present new vocabulary, they should primarily try to achieve two things:

- 1) to enable the students to recognize the vocabulary well,
- 2) to make spelling and word building absolutely clear, so that when the students produce them, propped by the teacher, they know how to spell and what kind of vocabulary they are learning.

2.7.2. The principle of teaching vocabulary

In teaching vocabulary, the teacher as the authority of the class has the job of managing the students' learning to gain the target of the vocabulary.

According to Wallace (1982, p.27), there are six principles on which teaching vocabulary is to be based; they are:

- 1) *Aims*: "How many of the things listed does the teacher expect the learner to be able to achieve the vocabulary of what kinds of words?" (Wallace, 1982, p.27). The aims have to be clear for the teacher before they teach vocabulary to the students.
- 2) *Quantity*: The teacher has to decide on the quantity of vocabulary to be learned. The decision on the number of new words in a lesson is very important. The actual number still depends on a number of factors varying from class to class and learner to learner (1982, p.28).
- 3) *Need*: In teaching vocabulary, the teacher has to choose the words really needed by the students. The students should be put in a situation where they have to communicate and get the words they need (1982, p.28)
- 4) *Frequent exposure and repetition*: The teacher should give so much practice and repetition until his students master the target words well.
- 5) *Meaningful presentation*: The teacher should present the target words in such a way that their meanings are perfectly clear and unambiguous, so the new word should be presented in context, not in isolation (1982, p.29).
- 6) *Situation presentation*: The students should learn words in the situation in which they are appropriate (1982, p.29).

From the principles above, in the teaching-learning process, the teacher should be able to identify who are the students, what are their needs, and how should the teacher

teach simply and interestingly. Different ages of students indicate that they also have different needs and interests.

2.7.3 The role of vocabulary in language learning

Vocabulary plays an important role in language learning. Nation (1990) stated that students cannot communicate or read books if they do not have the vocabulary. The students cannot express their opinions or ask for the information they need if they have no words. Furthermore, vocabulary learning is an essential part of language learning. Learning words can be considered the most important aspect of second language acquisition (Knight, 1994). Vocabulary learning is a process that takes a great deal of time and effort from EFL learners and according to Schmitt (2000, p.137) "*it is a slow process*". Compared with grammar, vocabulary is indicated to be more important. Wilkins (1972) argued "*without grammar very little can be conveyed, without vocabulary nothing can be conveyed*" (p.111). Similarly, Allen (1983) pointed out that both grammar and vocabulary should not be ignored, but before teaching grammar, it is necessary to teach vocabulary. In the same way, Flower (2000) suggested that words are the most important thing students must learn.

In short, vocabulary appears to play a key role in language learning and teaching. Learners need to master vocabulary knowledge to be successful in learning a language. In comparison with grammar, vocabulary is considered more important in communicating by many researchers (Wilkins, 1972; Allen, 1983; Flower, 2000).

2.7.4 The role of memory in vocabulary learning

Memory plays a main role in language learning for the main purpose of language learning is to retain information for later use. According to Webster's New World Medical Dictionary (2008), memory is the ability to recover information about past events or knowledge. In this study related to retention, memory comes in two basic types: short-term memory and long-term memory (Schmitt, 2000). Short-term memory is used to store information for only a few seconds. Gairn and Redman (1990) claimed short-term memory is limited in capacity. In general, short-term memory is fast and adaptive but it has a small storage capacity. The purpose of vocabulary learning is to transfer the learned vocabulary from short-term memory to more permanent long-term memory. Generally, short-term memory is fast and adaptive but it has a small storage capacity.

"Long-term memory retains information for use in anything but the immediate future" (Schmitt, 2000). Richard (1993) expressed that long-term retention is part of the retention system where the information is stored more permanently. Furthermore, Gairns and Redman (1990) stated that long-term retention is our ability to recall information minutes, weeks, and years after the original input.

2.8 Retention

In Oxford Dictionary, retention is an ability to memorize things experienced or learned. Scrivener (2003) defined retention as the mental capacity to keep information. The term

“retention” usually refers to a conscious process that may involve rote learning, practice, associative learning. Hedge (2000) posed that retention is related to the condition in which the meaning is inferred and the more analysis involved, the better the retention.

Retention depends in some ways on the amount of mental and emotional energy used in processing a word and readers have developed certain strategies that could assist emotional and mental processes such as meta-cognition strategies (Khabiri and Pakzad, 2012). Nevertheless, in Meaningful Learning Theory, Ausubel (1968) pointed out the difference between meaningful and rote learning. From his ideas, rote learning involves the mental storage of items having little or no association with existing cognitive structure. In fact, it is the process of acquiring material as discrete and relatively isolated entities. On the other hand, in the process of meaningful learning, learners know how to relate the new material to relevant entities in cognitive structure.

2.8.1 The process of retention

The objective of vocabulary learning is to transfer lexical information from the short-term memory to the long-term memory (Schmitt, 2000). The main way of transferring learned information from short-term memory to long-term memory is “...by finding some preexisting information in the long-term memory to “attach” the new information to. In the case of vocabulary, it means finding some element already in the mental lexicon to relate the new lexical information to” (Schmitt, 2000).

Ellis and Sinclair (1989) indicated that long-term memory allows short-term maintenance of sequence information, and short-term rehearsal of sequences promotes the consolidation of long-term memories of language sequences. Similarly, Gairns and Redman (1990) stated that long-term retention is our capacity to recall information after four weeks after the original input. To him, the distinction between short-term retention and long-term retention is not always clear-cut. Information entering short-term memory may pass quite effortlessly into long-term memory, and some students may find repetition a very effective way of transferring information into long-term memory.

2.8.2 Vocabulary retention

Vocabulary retention is “the ability to recall or remember things after an interval of time. In language teaching, retention of what has been taught (e.g. grammar rules and vocabulary) may depend on the quality of teaching, the interest of the learners, or the meaningfulness of the materials” (Richards and Schmidt, 2002, p.457). Scrivener (1998) defined retention as the mental capacity to store information. Furthermore, the problem is not just in learning vocabularies, but rather in remembering them. In addition, the students are recommended to learn words through reading comprehension, retention might be better. Learning a word in context during a reading activity, the meaning of the word is clearer and the meaning of a word has to be retained in the long-term memory. Haycraft (1978) claimed that the words and some family words can be easily retained and using the word in the sentence is the best retention.

2.8.3 The relation between PPT and students' vocabulary retention

In order to help students, develop their memory capacity in various tasks, it would be helpful if teachers consider points and ideas in improving their memory. This would make students' retention more efficient and sharper. Besides, students can get different types of vocabulary input using PPT. Using multimedia materials, PPT can display written text and use sounds, still pictures, and video.

Vialeinnou & Cole (2011) stated that in the PPT presentations, students heard and saw at the same time. The combination of the two simultaneous activities allowed them to better focus their attention. Students feel things are more real and more easily understood. As a result, PowerPoint is much more powerful and flexible than the other methods (Jones, 2003). In the study of Higgins (1995), students can get different types of vocabulary input using PPT. PowerPoints can display written text and use sounds, still pictures, and video by using multimedia materials. Students feel things are more real and more easily understood. Through simulation and other techniques, computers can present abstract things in a concrete and easily understood way.

Craik and Lockhart (1972) stated that meaning processing plays a role in memorization. They analyzed the levels of external information processing that lead to the retention of memory such as words, sounds, images, and smells. They proposed what they call "depth of processing", where the early stages focus on the physical features of the input whereas the later stages are related to the association of this information to the background information of the learner. This means that a greater depth of processing implies a greater semantic and cognitive analysis.

Haviland and Kramer (1991) suggested the number of vocabulary items to be introduced should vary from 6 to 8. Students should be exposed to these items and use them on several occasions in different ways in order to learn. Just rote repetition in a list will sound like they will be understood. Then the items should be transferred in a context where students are trained to use them to express themselves appropriately to the situation. Finally, to consolidate the items, or to store them in a long-term memory, students should be able to use them in several, or many, different situations in their daily lives.

2.9 Reading comprehension

Reading comprehension is to recognize in all respects the information, feelings, and thoughts that are desired to be transmitted as they are, without having caused any misunderstanding in its course and without leaving any doubtful points behind. Kavkar, Oguzkan, & Server (1994), as cited in Aksan and Kisac, (2009). And, Thompson (1987) said that reading comprehension is the ability to keep information and the main factors that affect comprehension of the information in the text. It is dependent on being able to comprehend language and the ability to decode or understand a word's phonological representation (Hoover, 2002). Furthermore, "*reading comprehension is critically important to the development of children's reading ability and therefore their ability to obtain an education*" (National Institute of Child Health and Human Development, 2000, p.4-1). One of the

most well-known definitions of reading is provided by Anderson et. al (1985, 9.79) "*reading is the process of constructing meaning from writing texts. It is a complex skill requiring the combination of a number of interrelated sources of information*".

According to Wallace (1982), reading is a tool for survival, a medium for social interaction, and a means to access general knowledge of the world. Reading in the past decades was considered as a process of recognizing letters to form words and words to form sentences (Morales, 2010).

2.10 The relationship between vocabulary knowledge and reading comprehension

Vocabulary knowledge and reading comprehension have a close relationship with each other, vocabulary knowledge can help the learner to comprehend written texts and reading can contribute to vocabulary growth (Chall, 1987; Nation, 2001; Stahl, 1990). Some researchers claim that vocabulary is the most important factor in reading comprehension. Laufer (1997, p.20) claimed that "*no text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary*". Furthermore, Kieffer and Lesaux (2007) stated "*the more vocabulary students have, the more they comprehend; the more they comprehend, the more they read; the more they read the more words they learn.*" According to Laufer (1989) argued that a reader who is insufficient vocabulary to cover at least 95% of the words in a passage will not be guaranteed comprehension. Learners consider vocabulary to be the main obstacle to second-language reading comprehension.

2.11 Related studies

In this part of the study, some previous studies relating to this study will be reviewed. Many of the researchers (e.g., Fisher, 2003; Schcolnik and Kol, 1999; Zhao, 2005; Lin & Chen, 2007, Nouri & Shahid, 2005; Chun and Plass, 1996; Francia, 2009) who studied PPT applications in the classroom observed that teachers could exploit many PPT features to present various aspects of a new language.

Fisher (2003) confirmed that PPT can be used in many ways in the ESL classroom as well as in other classrooms. He stated that "*PPT is a useful tool that is now being used in many classrooms. PPT is a type of presentation software that allows one to show colored text and images with sample animation and sound.*" Zhao (2005) provided evidence for the effectiveness of implementing technology in speaking skills, according to this researcher, implementing technology can help to facilitate communication through stimulating student talk around PPT-based activities.

In the study Schcolnik and Kol (1999) reported on two uses of PPT that they had applied in the language classroom: one as a presentation tool, and the other as a novel writing tool and they found that oral presentation through PPT improved meaningful interaction. According to one Vietnamese study, PPT may enhance visual, audio, and psychological interactions and negotiation of meaning (Nguyen, 2008). Several research studies in Computer Assisted Language Learning (CALL) learning environments. For example, Van Aacken (1996) used computer software designed to improve Kanji learning

in a self-access learning mode. The result showed that most of the students in an Australian university using computers to learn Kanji made higher gains and that those most enjoying the experience made the highest gains. In this condition, Bakar (2007) investigated how computer-based activities are organized in a Malaysian Secondary Smart School that is totally dependent on the syllabus. He concluded that the use of computers in school is highly dependent on the type of syllabus and the objective of the curriculum.

A study by Nouri & Shahid (2005) showed that PPT may improve student attitudes toward the teacher and class presentation and improve short-term or long-term memory. This study involved 74 students in two sections who were used as the control and treatment groups. Students in the traditional group (without PPT) received only a text-based, black-and-white presentation, while students in the treatment group (with PPT) received pictures, color, and animation in instructional delivery. The same instructor taught both sections of the course. The results demonstrated that students in the PowerPoint section reported a higher understanding of classroom presentations.

Chun and Plass (1996) showed three studies of the effectiveness of multimedia annotations on vocabulary acquisition. Participants were second-year students of German at three universities. The students watched a video preview which gave an overview of a German short story and then read the story and looked up the meaning of individual words by freely selecting any of the different types of annotations available in the form of text, pictures, and video. In all three studies, the students were able to look up words that had been annotated in a multimedia program. For this issue, they clicked on the word and held the mouse button down, and then dragged the word to icons indicating the types of annotations available (picture, text definition, and video) and dropped it on the icon presenting the desired annotation. The findings showed a higher rate of incidental learning of vocabulary and significantly higher scores for words that were annotated with pictures and text than for those with video and text or text only.

In another study, Francia (2009) conducted a study on the power of PowerPoint in listening with first-year Spanish students at a Southern university. This study investigated the potential effects of visually enriched PowerPoint on students' listening outcomes. Participants in this study were a total of 45 students in the pilot study and 46 students in the main study. The main study was conducted during the first semester of a mandatory two-semester basic language course. The learners in the study were two university classes of beginning-level students of Spanish who had not previously taken Spanish or who had not taken Spanish in the 4 years prior to enrolling. There were two experiment conditions in this study such as VEPP (visually enriched PowerPoint) accompanying pre-, during-, and post-listening activities and Non-VEPP pre-, during-, and post-listening activities. The results of this study revealed that Spanish foreign language learners at beginning levels seem to perform better in listening comprehension when they are provided visual cues via PowerPoint during the pre-, during-, and post-listening stages.

3. Research methodology

3.1 Research objectives

The research aimed:

- 1) to investigate the effectiveness of PPT on vocabulary retention in reading comprehension of the first-year students at DLA,
- 2) to study the students' attitudes towards their learning with PPT.

3.2 Research questions

The data collected are discussed around two questions:

- 1) In what ways does PPT help students retain vocabulary in reading comprehension of EFL first-year students at Long An University of Economics and Industry?
- 2) What are students' attitudes towards learning vocabulary with PPT?

3.3 Participants

The study was conducted during the second semester of a mandatory four-semester general English program for freshmen. The researcher-teachers were lucky enough to have two classes of the course, a total of 60 students within 250 non-English major students. All of them were freshmen. This study was conducted with 2 classes (13KT-Economics and 13QT-Business Administration). They majored in a range of academic areas related to accounting and business administration. There were 30 students in each class. The 13QT class had 18 females and 12 males and was randomly chosen as the experimental group and the 13KT included 20 females and 10 males as the control group. Their age was 19.5 ranging from 18 to 21. They are from different areas around DLA, Long An Province. Most of them live in the countryside. The researchers met the classes one day a week for 180 minutes. The semester was approximately 10 weeks long.

There were some reasons that the first-year students were chosen for this research on vocabulary. According to Brown (2001), teaching beginners is considered by many to be the most challenging level of language instruction. Since students at this level have little or no prior knowledge of the target language, the teacher (and accompanying techniques and materials) becomes a central determiner of whether students accomplish their goals (p.98). Firstly, first-year students have just learned English vocabulary in high school with the traditional method. They did not get used to PPT. Secondly, the first-year students study general English according to the course objectives for non-English major classes.

At the time of this research, they were studying in the second semester. They were going to study Unit 11 and Unit 12 of *Face2Face English Textbook-Elementary* (Chris Redston & Gillie Cunningham, 2005). In the first semester, they had already studied Unit 9 and Unit 10 of the book. During the first semester at DLA, they did not have a chance to study vocabulary with PPT, either because most of the teachers at DLA got used to teaching with the traditional method.

3.3 Research design

The research was carried out as a quasi-experimental design. Quasi refers to the fact that the participants in the sample were not randomly assigned to groups. They concluded pre-test and post-test to collect students' scores and a questionnaire to collect the data. The experiment was conducted in 10 weeks. The control group and the experimental group were instructed by the same teacher (and also the researcher) at DLA. The design of the study was a pre-test and post-test control group design, in which class 13KT was selected as the control group and class 13QT as the experimental group. Both groups used the same textbooks for vocabulary learning. In addition, the students in the experimental group were required to answer a questionnaire after the experiment. The difference between the two groups is that PPT was used in teaching vocabulary in the experimental group while teaching vocabulary without PPT was carried out in the control group.

3.4 Materials

The materials were the contents in the textbook of Face2Face - Elementary (Chris Redston & Gillie Cunningham, 2005). Face2Face (F2F) is a general English course for young adults who want to learn to communicate quickly and effectively in today's world. This book has five series: Starter, Elementary, Pre-intermediate, Intermediate, and Upper Intermediate. The aims and objectives of the textbook series for students are to help students to be able to use English to communicate through listening, speaking, reading, and writing, to develop general knowledge and attitude towards the people, and cultures of some English-speaking countries. In this study, the students learned with the F2F-Elementary. There are 12 units in this book.

Table 3.1: The vocabulary points of F2F- Elementary textbook

Units	Titles	Vocabulary topics
1	Meeting people	Color, countries, numbers
2	People and possessions	Family, things in a house
3	Daily life	Daily routine, free time activities, months and dates
4	Time off	Food and drink
5	Homes and shops	Places in a town/ the city, shops, clothes
6	Good times, bad times	Life events, weekend activities
7	Films, music, news	Types of film, music
8	Let's go away	Holiday activities
9	All in a day's work	Work, transport, indoor and outdoor activities
10	Mind and body	Health, describing people's appearance and character, seasons, weather
11	Future plans	Studying
12	Life experiences	Big and small numbers, things and places at an airport

The syllabus and the English textbooks used in this school include "Face2Face-Elementary" which consists of 12 units. Each unit focuses on language skills: listening, reading, and writing and some language elements including pronunciation, grammar, and vocabulary. First, *listening* aims to develop students' listening skills such as listening for general, listening for specific information. The students can listen to the conversations,

and articles and practice their listening skills. Second, *reading* aims to develop students' reading skills. It is also used as a context for the development of students' reading skills as well as vocabulary and grammar, to help students with the practice of speaking, listening, and writing in English. In this part, the teachers selected about 9 to 10 vocabularies and showed them on the computer screen together with sounds, pictures, antonyms, and synonyms to help students remember vocabulary longer. Third, *grammar* parts focus on some basic figures such as subject pronouns, possessive adjectives, simple present, simple past, question forms, present continuous, imperatives, comparatives, and superlatives.

Each unit consists of listening, writing, reading, vocabulary, and grammar. Vocabulary and grammar are given equal importance and there is a strong focus on listening and reading in social situations. In this semester of the study, the students just studied two Units from 11 to 12. All of the lessons were designed on the computer with PPT software. The PPT was used in all of the stages of every lesson from warm-up to three main stages including pre, while, and post. In the reading period, less than 10 new words were presented to help students read and understand the text. In addition, images, sounds, synonyms, and antonyms together leading to help students remember vocabularies better. Students were asked to discuss the questions in pairs or groups. All of the contents of the tasks and students' answers were posted on the computer screen.

In listening, writing, and speaking periods, in the pre-stage of each lesson, the new words were presented by PPT to help students understand the contents of the lesson; furthermore, images together with leading or situation questions were raised to prepare students for the ideas of the new lesson. The students were asked to discuss the questions in pairs or in groups. This semester, the students have just studied two units. It is assumed that after finishing two Units from the textbook F2F, the students can: (1) widen some new vocabularies, (2) improve listening, speaking, and reading skills.

3.5 Research instruments

The instruments used in this experiment included two tests (pre-test and post-tests), which were used as a method of collecting data to measure the students' retention of vocabulary, and the questionnaire for the students which investigated the students' attitude toward using PPT in teaching vocabulary. Students did not know the purpose of this research. The students were told about this research and its purpose on the last day of class. The PowerPoint presentations were presented on the projector screen located in front of the class. The slides were coordinated with the sound and images. The vocabulary tests were prepared to see the vocabulary retention the students learned through the teaching stage.

3.5.1 Pre-test

The teachers designed tests on vocabulary to measure the quality of participants' vocabulary learning ability before and after the research. The pre-tests were delivered to the students in both the control and experimental groups on the first day of the course.

The aim would evaluate the participants' vocabulary ability to learn English. The pre-test which lasted 15 minutes was carried out at the beginning of the second semester. The content of the test was based on the structural vocabulary points. It included multiple-choice questions and matching. There was clear instruction in the whole vocabulary test as well as in each part. To minimize cheating, while the students were doing the test, the teachers observed very strictly.

The test consisted of 25 sentences. In each sentence, the target words (English-Vietnamese) were included and in bold. There were two parts to the test. The first section, the multiple choices, consisted of 17 questions. The questions focused on finding the synonym, antonym, and the meaning of the word. In this part, students were required to read the sentence and choose the correct answer. And, the second section was matching. There were 8 vocabularies and 8 definitions in English. Students had to guess their meanings and terms by remembering from the PPT slides, which they had learned before. This task aimed to test the student's vocabulary knowledge. Each correct answer will get 4 points. The total score of the test is 100.

3.5.2 Post-test

The post-test was similar to the pre-test in terms of content, task types, time allotted, and number of tasks and it was distributed to the students in both groups on the date of the final test for the control group and the experimental group which aimed to measure the participants' abilities to retain and use vocabulary between two groups. In the first part of the test, the teacher reordered the number of sentences to avoid student copies and learned the answer automatically. To ensure reliability and validity, participants were not informed in advance that they would be retested. The test was used to measure the participants' abilities to retain and use vocabulary between the control and experimental groups using PowerPoint.

3.5.3 Questionnaire

According to Herbert and Shohamy (1989), questionnaires were used mostly to collect data on phenomena that are not easily observed, such as attitudes, motivation, and self-concepts. One of the strengths of questionnaires is that it is less time-consuming for the researcher. Furthermore, Richard (1996) stated "*questionnaires are useful ways of gathering information about affective dimensions of teaching and learning such as beliefs, attitudes, motivation, and preferences and enable a teacher to collect a large amount of information relatively*". They were also used to collect data on the processes involved in using language and to obtain background information. This questionnaire was designed to gather information on participants' attitudes when PPT is used to teach vocabulary. The questionnaire included two main parts. The first part was for the students' personal information, asking the students to fill in their information about their name, sex, age, and class. The second part consisted of 20 open-ended questions. The items were adapted from the questionnaire for other research studies (Parker et al. (2008), Lin. V. C. S., 2006, James et al., 2006, Chang, 2005). There were 20 questions that followed the Likert scale.

In the Likert scale question, possible responses were ranked from 1 to 5 (1 = strongly disagree, 2 = disagree, 3 = neutral / neither agree nor disagree, 4 = agree, 5 = strongly agree). All items were categorized into three clusters concerning attitudes towards (1). Cognitive consisted of items 1, 2, 3, 4, 5, 12, 15, 18, 20, (2) students' feelings were in 6, 7, 8, 9, 16, 17, 19 and (3) classroom interactions with 10, 11, 13, 14 ones.

Table 3.2: The attitudes towards the cognitive learning

Question	Content
1	I believe that the teacher invests in the lessons and pays much attention to students when she uses PowerPoint in teaching vocabulary.
2	I consider that learning vocabulary with the help of PowerPoint makes the meaning of words clearer.
3	PowerPoint's pictures and effects stimulate my curiosity in learning.
4	I believe that learning vocabulary via pictures and examples makes me remember to learn vocabulary when doing test.
5	I consider that learning vocabulary with the help of PowerPoint lets me get higher marks in testing.
12	PowerPoint increases my vocabulary in class when the teacher uses it.
15	I find that examples and illustrations are shown clearly by PowerPoint.
18	Learning vocabulary through PowerPoint makes me acquire the lesson more easily.
20	I find that using PowerPoint in teaching vocabulary not only decreases the

Questions 1, 2, 3, 4, 5, 12, 15, 18, and 20 focus on the students' attitudes towards their cognitive learning.

Table 3.3: The attitudes towards the students' feeling

Question	Content
6	I feel that I memorize vocabulary longer when it is illustrated by PowerPoint.
7	I find it more interesting to learn vocabulary through PowerPoint.
8	I feel learning English is attractive when PowerPoint is used.
9	I feel more active in learning vocabulary periods with PowerPoint.
16	I prefer learning vocabulary with PowerPoint to learning vocabulary in the traditional way.
17	When learning vocabulary through PowerPoint, I have a motivation to study to know more about that lesson.
19	I want to learn vocabulary with PowerPoint more frequently.

The questions 6, 7, 8, 9, 16, 17, and 19 were related to the students' feelings towards their learning with PowerPoints

Table 3.4: The attitudes towards the classroom's interaction

Question	Content
10	I consider that PowerPoint makes me pay more attention to learning vocabulary.
11	I often observe and participate actively in the teacher's speech when the teacher uses PowerPoint in teaching vocabulary.
13	When the teacher uses PowerPoint to teach vocabulary, I can take notes more easily.
14	Learning vocabulary through PowerPoint makes the classroom's atmosphere more exciting.

In questions 10, 11, 13, and 14, some attitudes towards the students' classroom interaction were mentioned.

The questionnaire was designed in English and Vietnamese versions to ensure students could understand all of the items clearly. In addition, to avoid participants' misunderstanding, the questionnaire was translated into Vietnamese. The Vietnamese version of the questionnaire was distributed and carried on after the participants had finished the lessons with PPT in 10 weeks so that they could make a clear comparison between classes with PPT and those without PPT. Moreover, the students were delivered only the Vietnamese- version questionnaire to save their time and reduce their confusion. When the students had any difficulty understanding a certain item in the questionnaire, the teacher explained it to them. The teachers gave the students time to think carefully about the matter and the questionnaire was delivered and finished at the end of the final lesson, and collected immediately after they finished with the observation of the researcher so that the students did not have a chance to discuss about the answers together. Sixty sheets were distributed and collected. The percentage was 100%.

3.6 The procedures of data analysis

The researchers based on the results of the pre-test and post-test to investigate the effectiveness of PPT on vocabulary retention in reading comprehension of EFL first-year students. The descriptive and Independent Samples t-test were used in the statistical procedure to collect the data.

SPSS Statistics version 20 was employed to calculate the descriptive statistics in the quantitative data analysis. First, Cronbach's Alpha was calculated to determine the reliability and validity of the test as well as the questionnaire in the study. Second, the results of Mean and SD statistics in the t-test were used to find out the difference between the control group and the experimental group. The sources of data collected from questionnaires were analysed to identify the students' attitudes toward PPT on vocabulary retention.

4. Findings and discussion

4.1 Findings from the comparison of students' vocabulary retention on the tests

To evaluate the retention of participants in vocabulary, the researchers used vocabulary tests. At the beginning of the study, the pre-test was administered to evaluate the knowledge of vocabulary in each group. At the end of the study, the post-test was administered to both groups to examine the influence of PPT on vocabulary retention.

4.1.1 Scores from the tests between two groups

The pre-test was used to measure students' short-term memory of what they learned vocabulary. Furthermore, the post-test was used to measure the students' long-term memory. The students in both groups took the pre-test before they learned the vocabulary and two months and a half later, they took the post-test.

The Descriptive Statistics Test on students' scores on the pre-test and post-test was computed. The results are presented in Table 4.1

Table 4.1: The Descriptive Statistics on students' scores on the pretest and posttest

Tests	Groups	N	Min	Max	Mean	Std. Deviation
Pre-test	Control	30	4.0	6.4	5.12	.637
	Experimental	30	4.0	6.4	5.04	.592
Post-test	Control	30	4.0	7.6	5.68	.155
	Experimental	30	4.8	9.6	7.22	1.125

Table 4.1 shows that after two tests the mean score of students' pre-test ($M = 6.4$) and the post-test ($M = 9.6$) of the experimental group is higher than the mean score of the control group in comparison to the pretest ($M = 6.4$) and the posttest ($M = 7.6$).

A. The pretest

The Independent Samples *t*-test was conducted on the mean scores of the two groups in the pre-test to ensure that the level of vocabulary in reading comprehension of the control group and the experimental group were the same. The results from the tests are presented in the table below:

Table 4.2: Independent samples *t*-test on the pre-test

Scoring	Conditions	N	t	df	Mean	Sig. (2-tailed)	MD	SD
Pre-test	Control	30	.545	58	5.126	.588	-.08	.637
	Experimental	30	.545	58	5.040	.588		.592

As shown in Table 4.2, the sample sizes (N) of two groups are 30 students. The total mean score of the control group before the treatment ($M = 5.12$) and that of the experimental group ($M = 5.04$). These scores indicated that the levels of the two groups were above average.

In order to see whether the two groups performed statistically differently on the pre-test, the Independent Sample *t*-test was calculated. An Independent Sample *t*-test was conducted to evaluate whether there was a significant difference between the control group and the experimental group. The difference was not significant ($t = -.54$, $df = 58$, $p = .58$) The significance value ($p = 0.588$) was 0.588 which is greater than 0.05. It can be assumed that the means of the two groups were not significantly different. Therefore, there is no significant difference between the mean scores of the control group and the experimental group. This result indicated that before the study participants in the two groups did not differ from each other in terms of vocabulary retention level.

B. The post-test

In order to examine the effects of PPT on vocabulary retention on reading comprehension, the researcher compared the mean score of the posttest within the groups. The Independent Samples *t*-test was used to illustrate the mean difference

between the two groups after studying with PowerPoints. Table 4.3 records the results from the test.

Table 4.3: Independent Sample *t*-test on the post-test

Scoring	Conditions	N	t	df.	Mean	Sig. (2-tailed)	MD	SD
Posttest	Control	30	-5.973	58	5.68	.000	-1.54	.155
	Experimental	30	-5.973	58	7.22	.000		1.125

As presented in Table 4.3, after the study, the mean score of the experimental group was 7.22 and the control group was 5.68. Moreover, the mean score of the experimental group was much higher than that of the control group. The Independent Samples *t*-test showed that after the study the participants' vocabulary retention was significantly different. The post level of the experimental group is higher than that of the control group and the participants in the experimental group gained more in their vocabulary retention. The Independent Samples *t*-test showed that ($t = -5.97, df = 58, p = .000$). This means that after the study the participants' vocabulary retention was significantly different. The post level of the experimental group is higher than that of the control group; the students in the experimental group gained more in their vocabulary retention.

4.1.2 Scores from the test within each group

A. The control group

A Paired Samples *t*-test was conducted on the students' pre and post-test scores to evaluate whether students retain more vocabulary over a long time. The results of these tests are reported in Table 4.4 below.

Table 4.4: Paired Samples *t*-test on the control group

Scoring	Tests	N	t	Mean	MD	Sig. (2 tailed)	SM	SD
Control	Pretest	30	-6.026	5.12	-0.56	.000	.09182	.502

As shown in Table 4.4, the participants' vocabulary retention in the control group changed after the study. The mean score of the participants' vocabulary retention of the control group after the study ($M_{post} = 5.68$) was higher than that of the same group before the study ($M_{pre} = 5.12$). Besides, this mean difference ($MD = -0.56$) was statistically significant. It could be observed that the participants' vocabulary retention in the control group had improved.

B. The experimental group

Table 4.5 below also shows that participants' vocabulary retention in the experimental group changed after the study. The mean score of participants' vocabulary retention of the experimental group after the study ($M_{post} = 7.22$) was higher than that before the study ($M_{pre} = 5.04$). In addition, the Paired Samples *t*-test gives statistical evidence that this mean difference ($MD = -2.18$) was statistically significant ($t = -10.49, df = 29, p = .00$). The result indicated that there was a significant change in participants' vocabulary

retention in the experimental group after the study; the post level (after the study) was significantly higher than the initial level (before the study). It could be concluded that after the study the participants' vocabulary retention in the experimental condition had been significantly improved.

Table 4.5: Paired Samples *t*-test on the experimental group

Scoring	Tests	N	t	Mean	MD	Sig. (2tailed)	SM	SD
Experimental	Pre-test	30	-10.494	5.04	-2.18	.000	.207	.113
	Post-test	30		7.22				

4.1.3 Students' attitude

To measure the participants' attitudes towards the use of PPT in teaching vocabulary, the researcher used a twenty-item questionnaire on participants' attitude towards the use of PPT in teaching vocabulary. The questionnaire was delivered to the students in the experimental group. The participants marked their responses to each item on a five-point scale ranged from strongly disagree to strongly agree. Data collected from the questionnaire for the participants were subjected to the Statistical Package for the Social Sciences (SPSS) for data analysis. The five-point scale was coded from 1 as Strongly Disagree to 5 as Strongly Agree. The scale test was run to check the reliability of the questionnaire. The result showed that the reliability coefficient of the questionnaire is high ($\alpha = .963$). It indicated that the questionnaire on participants' attitudes towards the use of PPT in teaching vocabulary was reliable.

Descriptive statistics were computed for the mean score of the questionnaire to measure the participant's attitudes toward learning with PPT via learning with the traditional method. The results from the questionnaire showed that the lowest mean score was 3.7. The participants' attitudes towards cognitive learning were investigated by collecting the participants' responses to items 1, 2, 3, 4, 5, 12, 15, 18 and 20. In Item 1, the students believe that the teacher invests in the lessons and pays much attention to them when learning with PowerPoint and the pictures and examples make them remember learned vocabulary when doing tests (item 4). Moreover, in item 20, most of the students find that using PowerPoint in teaching vocabulary not only decreases the teacher's talking time but also increases their practicing time. The results are presented in Table 4.6 below:

Table 4.6: Participants' attitudes towards cognitive learning

Item	Mean	Standard Deviation
1	4.36	.49
2	4.13	.34
3	4.36	.55
4	4.16	.59
5	3.96	.66
12	3.90	.60
15	4.33	.47
18	4.06	.36
20	4.20	.48

As can be seen in Table 4.6, the mean score of questions is all larger than 3.00; this leads to the fact that the participants had positive attitudes toward using PPT to teach vocabulary retention in reading comprehension.

Questions 6, 7, 8, 9, 16, 17, and 19 were used to measure the participants' attitudes towards the students' feeling.

Table 4.7: Participants' attitudes toward the students' feeling

Item	Mean	Standard Deviation
7	4.30	.65
6	4.16	.59
8	3.93	.63
9	4.03	.49
16	4.16	.69
17	3.73	.69
19	4.10	.60

As presented in Table 4.7, the mean score of participants' feeling towards their study with PPT (items 6, 7, 8, 9, 16, 17, 19) is high. In response to item question 6 (M= 4.16), students agreed that they memorize vocabulary longer when it is illustrated by PowerPoint. Besides, Item 7 (M = 4.30) most of the students find PPT more interesting than learning vocabulary through PowerPoint. Moreover, in Items 8, and 9, most of the students like learning English with PPT (M = 3.93), and are more active in learning vocabulary (M = 4.03). Compared to the traditional method, PPT can help students become active, self-confident, and keenly involved in activities during the class. So, they preferred learning vocabulary with PPT to learning vocabulary in the traditional way (M = 4.16), and want to learn vocabulary with PPT more frequently (M = 4.10).

Table 4.8: Participants' attitudes towards the classroom' interaction

Item	Mean	Standard Deviation
10	4.20	.40
11	3.93	.44
13	4.13	.50
14	4.40	.49

Table 4.8 shows that participants had positive attitudes toward PPT in terms of classroom interactions. The result indicates that PPT makes the students pay more attention to learning vocabulary (M = 4.2), and they often observe and participate actively in speech when the teacher uses PPT (M = 3.93), take notes more easily in class (M = 4.13), the classroom atmosphere more interesting (M = 4.4).

4.2. Discussion

To fulfil the research purposes, the study was conducted based on the two research questions. The answers to these questions were presented as follows.

Question 1: In what ways does PPT help students retain vocabulary in reading comprehension of EFL first-year students at Long An University of Economics and Industry?

Concerning the first research question, the results indicated that PPT had positive effects on vocabulary retention in reading comprehension of EFL first-year students at DLA. First, the students learned vocabulary easily with PPT and could remember them longer. Second, they had a good environment to practice English.

Question 2: What are students' attitudes towards learning vocabulary retention?

In the current study, the findings from the questionnaire were delivered to the students who learned with PPT. According to the students, they feel more comfortable and confident in learning with PPT. Most of the students greatly expected their teachers to employ more PPT so that they could quickly understand the lesson and retain new words.

From the results of the study, the participants' vocabulary retention in the two groups increased. These results indicated that there was a significant improvement in participants' vocabulary performance in the experimental group. In other words, the participants in the experimental group gained more in vocabulary retention than those in the control group. The mean score of the participants' vocabulary retention of the control group after the study ($M_{\text{post}} = 5.68$) was higher than that of the same group before the study ($M_{\text{pre}} = 5.12$). The mean score of the participants' vocabulary retention of the experimental group after the study ($M_{\text{post}} = 7.22$) was higher than that of the same group before the study ($M_{\text{pre}} = 5.04$). However, after the study, the mean difference between the two groups ($MD = -2.18$) was statistically significant.

In order words, the data from the questionnaire showed that the students in the experimental group with PPT had positive attitudes toward using PPT on vocabulary in the reading classroom for a long time in an interesting and friendly classroom environment.

4.2.1. Advantages of applying PPT in teaching vocabulary

First of all, in traditional classes with traditional methods, the students had the habit of checking the meaning of new words in the dictionary or asking the teacher. But when studying with PPT, they find it easy to memorize new words through pictures, sound, colour, etc. Therefore, the ability to use words correctly can be improved greatly. In addition, they know how to guess the meaning of the words through pictures, synonyms, antonyms, sounds, etc. which is essential in the process of teaching vocabulary. Second, the students had a good environment to practice English. Actually, PPT motivates students by providing visual and interactive features. Froehlich (1999) affirms the positive effects if visuals on people, which is also true in Vietnamese culture.

Most students prefer and respond more favourably to visual stimuli than sound only. *"The learning process today is characterized by being informed and entertained simultaneously through a combination of complementary, easily absorbable signals to our senses.*

Foreign language education nowadays has to be fun" (Froehlich, 1999, pp. 150-151). Finally, learning vocabulary with PPT makes the students more comfortable, and confident and they have more time to practice English. They feel English is easy to learn.

4.2.2. Disadvantages of applying PPT in teaching vocabulary

However, when applying PPT in teaching vocabulary, there are some disadvantages including, firstly, it takes time for the teacher to find and select materials, and pictures, as well as money because it requires a computer available at home. In addition, Brinton (2001) stated that the preparation of the teacher made an investment of time and energy beyond that of the normal lesson plan. As a result, a quite large number of languages express their unwillingness to use PPT in their class.

Secondly, not all teachers can design a lesson with PPT easily because their ability to use a computer is still limited. Herrell (2000) said that teachers who were not familiar with the tools might turn their lessons from a success to a failure as they fail to use the tools to support the lessons. In addition, the students are not familiar with the new modern technological teaching method because they used to be taught with traditional methods such as textbooks, and blackboards. In some cases, they just listen to the lessons attentively, but they forget to take notes in their notebook at home. As a result, they are not able to review the lesson well. Moreover, a crowded class challenges the teachers as they find it hard to control all of the students in a limited time and the students at the back cannot see the screen clearly.

Lastly, the lack of facilities like a projector, overhead, multimedia room, and a sound system as well as the bad quality will make it difficult for the teacher when they prepare the lesson carefully and keen on presenting to students. They will be discouraged next time and the lesson does not interest the students.

5. Conclusions

Based on the findings, it can be concluded that using PPT in the learning process contributed to the improvement of students' vocabulary techniques and was considered an effective way of teaching and learning process. The purpose of this research was to examine the effects of PPT on vocabulary retention in English reading comprehension as well as on students' attitudes toward the PPT. In fact, the students in the PPT classroom have opportunities to access interesting materials selected and compiled by the teacher; changing their habit of learning vocabulary in a better way. Furthermore, they have an active and comfortable environment to practice speaking more often in groups or with the teacher.

Overall, the results of the study have positive effects on the students. Using PPT has many benefits for the students. In a PPT classroom, the students have opportunities to access interesting materials selected and compiled by the teacher; and alter their habits of learning vocabulary in a suitable approach, which will help them retain vocabulary a

long time. In addition, PPT can build the students' motivation to study English, especially in learning vocabulary.

5.2 Pedagogical implications

The results of this study would provide some suggestions for teachers to overcome the problems when applying PPT in teaching vocabulary, especially in ESP classes. First of all, the teacher needs to prepare the lesson carefully beforehand and the lesson will surely be interesting and fit the time allotted. The teacher prepares well all the materials related to the subject before teaching because it is a basic step in achieving success in the result of teaching and learning process.

Next, the teacher may find a way to balance the time between vocabulary and reading part. More importantly, the teacher may choose suitable techniques for different students who have different styles and levels and depend on the students' interests and expectations. Another implication is that the teacher may try to modify the content of the skill practices in the textbook.

In general, there is no single method of teaching vocabulary. The authors really think the teacher may apply PPT in teaching vocabulary and PPT will help the students learn the readings more effectively through the good PPT. Also, the researchers believe that PPT can inspire students' interest and make the lessons more memorable.

5.3 Limitations

Although the study reached the aims of the research, there still exist some considerable limitations of this study. The most obvious limitation of the study concerns time constraints. In fact, the time for implementing PPT to teach vocabulary was short because it was carried during ten weeks and the amount of vocabulary in reading skills was limited to only five articles relating to the reading passages.

The participants were selected at the convenience of the researchers, based on the availability of students in their own classes. There was the intention of adding more participants to this research, but it was difficult due to curriculum and administrative limitations in the work setting.

Another limitation was that the interpretation of the results depended on the pre-test, post-test, and questionnaire in the English class at DAL. It does not mean that the results are the same if the study is conducted with other samples in other universities or schools. In addition, the sample groups of the study are quite small with 60 first-year students at DAL, so they cannot clarify the whole view of PPT in teaching vocabulary to different types of students.

5.4 Recommendations

To discover the effects of PPT on first-year students at DAL, this study has achieved some initial insight. However, there still remains much research to do.

First, the experiment was only confined to teaching vocabulary which was presented in *Face2Face English textbook - Elementary* (Chris Redston & Gillie Cunningham,

2005) from Unit 11 to Unit 12 for 10 weeks. It was not a long period of time. Moreover, in order to obtain further confirmation of the positive effects of PPT, future studies should test also these effects over a longer period of time.

Second, future studies should widen the scope of the study, and future studies on the use of PPT in teaching vocabulary should not be restricted to first-year students at DLA only. Perhaps such a study can look at all the different levels at DLA, namely the sophomores, the juniors, and seniors in various majors related to the different fields of study, which will give more diverse data on the findings. Due to the small population tested, further research on this experiment should be undertaken with a larger sample.

This study only addressed the effect of PPT on vocabulary retention on reading comprehension. It would be interesting to explore the effects of PPT on other English skills and areas such as grammar, writing, speaking, and listening. In addition, more instrumentation could be used to collect data. Apart from using a questionnaire and two tests, other data collection approaches, namely gathering field notes by conducting an interview, a classroom observation, and documentation techniques such as asking the students to keep a journal during the research study.

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Conflict of Interest Statement

The author declares no conflicts of interest.

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