THE INVESTIGATION OF USING DYNAMIC ASSESSMENT TO ENHANCE ENGLISH ACADEMIC VOCABULARY KNOWLEDGE OF THAI LOW PROFICIENCY UNDERGRADUATE STUDENTS

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การศึกษาการใช้การทดสอบแบบพลวัตเพื่อพัฒนาความรู้ด้านคำศัพท์ภาษาอังกฤษเชิงวิชาการของ
นักศึกษาไทยระดับปริญญาตรีที่มีความสามารถน้อย

น.ส.ดวงกมล คลังทอง

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ดวงกมล คลังทอง : การศึกษาการใช้การทดสอบแบบพลวัตเพื่อพัฒนาความรู้ด้านคำศัพท์ภาษาอังกฤษเชิงวิชาการของนักศึกษาไทยระดับปริญญาตรีที่มีความสามารถน้อย. (THE INVESTIGATION OF USING DYNAMIC ASSESSMENT TO ENHANCE ENGLISH ACADEMIC VOCABULARY KNOWLEDGE OF THAI LOW PROFICIENCY UNDERGRADUATE STUDENTS) อ.ที่ปรึกษาหลัก : รศ. ดร.ปัญชลี วาสนสมสิทธิ์

นักศึกษาระดับมหาวิทยาลัยต้องการคำศัพท์ภาษาอังกฤษเชิงวิชาการเพื่อเรียนภาษาอังกฤษเชิงวิชาการให้สำเร็จ (Phoocharoensil, 2015) กลยุทธ์การเรียนคำศัพท์เป็นเครื่องมือช่วยให้ผู้เรียนได้รับและพัฒนาความรู้ด้านคำศัพท์ (Nation, 2001) และควรมีการศึกษาการใช้กลยุทธ์การเรียนคำศัพท์ที่เปลี่ยนแปลงได้ตลอดเวลาโดยธรรมชาติ (Gu, 2020) การทดสอบแบบพลวัต (DA) เป็นการทดสอบทางเลือกที่ผสานการทดสอบและการสอนอย่างกลมกลืนและเป็นระบบเพื่อช่วยให้ผู้เรียนเข้าถึงพื้นที่รอยต่อพัฒนาการ (ZPD) โดยอาศัยความช่วยเหลือจากผู้ที่มีความสามารถมากกว่า (Lantolf & Poehner, 2004) ดังนั้นงานวิจัยนี้ใช้การทดสอบแบบพลวัตเพื่อช่วยให้นักศึกษาใช้กลยุทธ์การเรียนคำศัพท์เพื่อเรียนคำศัพท์เชิงวิชาการ งานวิจัยนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาผลของการใช้รูปแบบการทดสอบแบบพลวัตต่อความรู้ด้านคำศัพท์ภาษาอังกฤษเชิงวิชาการของนักศึกษาที่มีความสามารถน้อย 2) สำรวจทัศนคติของนักศึกษาเกี่ยวกับการใช้รูปแบบการทดสอบแบบพลวัตต่อความรู้ด้านคำศัพท์ภาษาอังกฤษเชิงวิชาการ งานวิจัยนี้ใช้วิธีวิจัยแบบผสมผสานโดยเน้นวิธีวิจัยเชิงคุณภาพ ผู้ร่วมวิจัยคือนักศึกษาชั้นปีที่สองจำนวนห้าคนที่เรียนวิชาภาษาอังกฤษพื้นฐานในปีที่หนึ่งซ้ำอีกครั้งและถูกเลือกเข้าร่วมวิจัยด้วยแบบทดสอบคำศัพท์ที่เป็นเครื่องมือคัดเลือกผู้ร่วมวิจัยสองชุด การจัดกระทำในงานวิจัยเป็นการสอนแบบเข้มข้นที่ใช้เวลาสี่สัปดาห์ ในแต่ละสัปดาห์เป็นการใช้ชิ้นงานหนึ่งชนิด ได้แก่ ชิ้นงานวิทยาหน่วยคำ ชิ้นงานชนิดของคำ ชิ้นงานการเดาความหมายจากบริบท และชิ้นงานการเขียนประโยค เครื่องมือที่ใช้ในการเก็บข้อมูลเชิงปริมาณได้แก่แบบทดสอบก่อนเรียน แบบทดสอบหลังเรียนทันที และแบบทดสอบหลังเรียนแบบเว้นช่วงเวลา เครื่องมือที่ใช้เก็บข้อมูลเชิงคุณภาพได้แก่ไฟล์บันทึกภาพและเสียงระหว่างการทำการทดสอบแบบพลวัต แนวคำถามสำหรับการพูดถ่ายทอดความคิด บันทึกภาคสนามของผู้วิจัย บันทึกสะท้อนคิดของนักศึกษา แบบสอบถามทัศนคติ และแบบสัมภาษณ์กึ่งโครงสร้าง การวิเคราะห์ข้อมูลเชิงปริมาณใช้คะแนนดิบและสถิติบรรยาย ส่วนการวิเคราะห์ข้อมูลเชิงคุณภาพใช้การวิเคราะห์แก่นสาระ

ผลลัพธ์แสดงให้เห็นว่าการทดสอบแบบพลวัตส่งผลดีต่อการเรียนคำศัพท์เชิงวิชาการเพียงเล็กน้อย นักศึกษาเข้าใจความหมายของคำแต่ไม่เข้าใจหน้าที่ของคำเชิงไวยากรณ์ในประโยคบริบท อุปสรรคหลักคือปัญหาการอ่านในระดับประโยค ไวยากรณ์ และวากยสัมพันธ์ และการฝึกนักศึกษาใช้พจนานุกรมเป็นสิ่งจำเป็น นอกจากนั้น นักศึกษาแต่ละคนเรียนรู้จากการทดสอบแบบพลวัตแบบกลุ่มได้ไม่เท่ากัน ในส่วนของทัศนคติของนักศึกษา พวกเขาคิดว่าการเรียนคำศัพท์เชิงวิชาการโดยการทดสอบแบบพลวัตเป็นเรื่องใหม่และมีประโยชน์ และนักศึกษาชอบที่เพื่อนช่วยเหลือในการทดสอบแบบพลวัตแบบกลุ่ม อย่างไรก็ตามบางครั้งประสบการณ์การเรียนรู้เดิม บุคลิกส่วนตัว และความสามารถทางภาษาอังกฤษทำให้พวกเขาไม่กล้าเสนอความคิดของตนต่อกลุ่ม จึงสรุปได้ว่า รูปแบบการทดสอบแบบพลวัตแสดงให้เห็นปัญหาที่ซ่อนอยู่ในกระบวนการคิดของนักศึกษาที่มีความสามารถน้อยในการเรียนรู้คำศัพท์ผ่านการทดสอบแบบพลวัตแบบกลุ่ม และผลการวิจัยทำให้เกิดข้อเสนอแนะเพื่อช่วยเหลือนักศึกษาต่อไป

สาขาวิชา	ภาษาอังกฤษเป็นภาษานานาชาติ	ลายมือชื่อนิสิต	....
ปีการศึกษา	2566	ลายมือชื่อ อ.ที่ปรึกษาหลัก	....

6288322820 : MAJOR ENGLISH AS AN INTERNATIONAL LANGUAGE
KEYWORD: dynamic assessment, vocabulary learning strategies, academic vocabulary, EFL, low-proficiency students

Duangkamon Klungthong : THE INVESTIGATION OF USING DYNAMIC ASSESSMENT TO ENHANCE ENGLISH ACADEMIC VOCABULARY KNOWLEDGE OF THAI LOW PROFICIENCY UNDERGRADUATE STUDENTS. Advisor: Assoc. Prof. PUNCHALEE WASANASOMSITHI, Ph.D.

Students in university settings require English academic vocabulary to succeed in academic English (Phoocharoensil, 2015). Vocabulary learning strategies (VLS) are tools to help learners acquire and improve vocabulary knowledge (Nation, 2001), and an examination of the dynamic nature of employing VLS should be conducted (Gu, 2020). Dynamic assessment (DA) is an alternative assessment that consistently and systematically combines assessment and instruction to help learners reach their zone of proximal development (ZPD) by using mediation from more competent others (Lantolf & Poehner, 2004). Thus, this study used DA to equip learners with VLS to learn academic vocabulary. The study aimed to 1) investigate the effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge and 2) explore students' attitudes toward the use of the dynamic assessment model on English academic vocabulary knowledge. This study adopted a mixed-methods design with the intensity of qualitative methodology. The participants were five second-year students who retook the basic English foundation course in their first year. They were selected by using two vocabulary tests as screening instruments. The intervention was intensive tutoring that lasted four weeks, each of which was for one task type: the morphology task, the part of speech task, the guessing meaning from context task, and the sentence writing task. The instruments used to collect quantitative data included the pretest, immediate posttest, and delayed posttest, and those employed to elicit qualitative data were recordings of DA sessions, verbal reports, the researcher's field notes, students' diaries, an attitude questionnaire, and a semi-structured interview protocol. Quantitative data were analyzed by means of raw scores and descriptive statistics, while thematic analysis was utilized to analyze qualitative data.

The findings showed that DA had minimal positive effects on academic vocabulary learning. The student participants understood the word's meaning but not its grammatical functions in contextual sentences. The problems of reading at a sentence level, grammar, and syntax were major obstacles, and teaching students to use dictionaries was necessary. Moreover, the learning gain of each student from the group dynamic assessment (GDA) was unequal. Regarding the students' attitudes, they thought learning academic vocabulary through DA was new and useful, and they appreciated having friends to help in GDA. However, their background learning experience, personality, and English ability sometimes hindered them from sharing ideas in the group. To conclude, the DA model uncovered the underlying problems in low proficiency students' cognitive process to learn vocabulary with GDA and the student findings suggested implications to assist them.

Field of Study:	English as an International Language	Student's Signature ....
Academic Year:	2023	Advisor's Signature ....

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being by my side, an excellent role model, and a reinforcement for me to hold onto righteousness. My warm love likewise goes to all my family members: my dad, elder sister and her family, and younger brother. I love you all.

Duangkamon Klungthong

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CHAPTER I

INTRODUCTION

1.1 Background of the Study

Second language learners in early language learning heavily rely on words and phrases to communicate. They process language input in the same way; that is, they comprehend meaningful content words and try to understand the context (Igarashi, Wudthayagorn, Donato, & Tucker, 2002). Therefore, vocabulary is a key tool for second language learners to acquire knowledge, communicate, and learn a second language (Milton, 2009; Sökmen, 1997). Substantial vocabulary is required in every stage of language learning (Laufer, 2001). What could account for this is that vocabulary is a fundamental part of a language and is necessary for forming larger meaningful language units such as sentences, paragraphs, and texts (Read, 2000). To explain further, vocabulary knowledge facilitates the development of the four English language skills (Cook, 1993; Stæhr, 2008), especially reading comprehension (Qian, 2002). Learners with a large vocabulary size are likely to consider reading easy (Chen, 2011). Thus, second language learners must have a considerable amount of vocabulary size (Nation, 2001). The approximate number of 3,000 high-frequency words and general academic words is considered a minimum requirement for effective reading at the university level because they cover most words on an average page (Hunt & Beglar, 2002; Laufer, 1992) that keep recurring (Milton, 2009). Furthermore, with that vocabulary size, learners can understand 95% of the words in conversation, television programs, and movies and can start watching such media for language learning (Webb, 2021). The 2,000-3,000 words allow learners to communicate in real-life language situations independently, although the number may

vary in different languages. Moreover, knowledge of between 2,000 and 2,500 words is likely started to move learners from beginner to intermediate levels (Milton, 2009). After knowing the high-frequency words necessary for written texts and real-life communication, learners should know more words such as 5,000 words to succeed in academia (Laufer, 1992).

Given the importance of vocabulary in language learning, the vocabulary size of Thai university students has been explored by many researchers. For example, Mungkornworng and Wudthayakorn (2017) explored the vocabulary size of 484 Thai freshmen in four public universities and three private universities in Bangkok and other regions across Thailand. All of the participants in this study graduated from Thai programs in high schools. The results indicated that they knew around 4,200 word families, which met the requirement of the Ministry of Education B.E. 2551 (A.D. 2008) that Grade 12 students should possess around 3,600-3,750 words. Another study showing Thai university students' decent vocabulary size was conducted by Nirattisai (2014) who investigated the vocabulary size of 257 Thai students at a southern university from Medicine, Dentistry, Nursing, Engineering, Accounting, and Hospitality and Tourism faculties. It was found that their average vocabulary size was 5,800 word families, with the highest size of 7,200 word families being from the students studying at the Faculty of Medicine. These high numbers seem satisfactory, but students from different contexts undoubtedly have varying vocabulary sizes. Pringprom and Obchuae (2011) found that 30 freshmen in an English foundation class at a private university in Bangkok could score only half of the total scores of the 2,000 and 3,000 word levels. Another study by Pringprom (2012) with 81 students in the same context also yielded similar results. Moreover,

Puagsang (2018) measured the vocabulary level of 242 first-year high vocational certificate students from five government vocational colleges in Krabi Province in southern Thailand and found that the students earned about only half of the total scores in the 1,000-2,000 word family levels. Also, they earned strikingly less in the 3,000-5,000 word family levels.

The reason behind the low vocabulary scores could come from the generally low English proficiency of Thai adults. Education First (2020) ranked Thailand at 89 out of 100 countries around the world based on its English test results, which reflected generally low English proficiency among most Thais. The performance of most Thai high school students is unsatisfactory as well. Grade 12 students' average score of English in the Thailand's O-Net (Ordinary National Education Test) in the academic year 2016 was 25.98 which was the lowest among all the subjects (Fernquest, 2017, as cited in Kanoksilapatham, 2018). One reason that may account for this is the unsuccessful implementation of various policies regarding Thai basic education. There are many changes in policies resulting in inconsistency in practice and misdirected teachers' and administrators' evaluation schemes. Some of the teachers are buried with paperwork for course evaluation done by outsiders, so they have less time for quality teaching in class and teachers' moonlighting is common (Kanoksilapatham, 2017). Moreover, due to the changes in policies and curricula of the Ministry of Education, local teachers have to adopt teaching methodologies without critical examination of the appropriateness of their contexts (Methitham & Chamcharatsri (2011). Also, key issues that have prevailed in English education in Thailand include inappropriate teaching methods, teachers' unqualified English skills, and overcrowded classrooms (Kirkpatrick, 2012).

The English as a foreign language (EFL) context, where English is not spoken outside the classroom, could likewise account for the limited vocabulary knowledge of Thai students. Yunus, Mohamed, and Waelaterh (2016) compared vocabulary knowledge between EFL, English major, Thai students in a southern university, and ESL Malaysian students and found that Malaysian students had a higher average Vocabulary Size Test score at 44.64 than Thai students at 20.92. In addition, none of the Malaysian students possessed words at only the 1,000-2,000 word levels, while 8.9% of the Thai students did. The researchers summarized that the Thai students had inadequate receptive vocabulary knowledge to meet the expected English level at the university level. Additionally, Siyanova-Chanturia and Webb (2016) noted that learners in various EFL contexts are underprepared for the university level as they may not know the high-frequency words in the first 1,000 words. According to Nation (2006), the first 1,000 words families are the most important because they cover 80% of written texts and 83% of spoken texts, and the words families in this group vary the highest. Moreover, Stæhr (2008) recommended that knowing the most frequent 2,000 words is crucial for EFL low proficiency students to understand most written and spoken texts and actively participate in written and spoken communication. In terms of vocabulary teaching, Towns (2020) pointed out that teachers might have difficulty in selecting vocabulary to be taught in an academic context and they probably opt for the most common solution by following the chosen words in a coursebook, which usually has reading passages, vocabulary lists from the passages, and vocabulary building exercises. However, it is doubtful whether they are the words that students should learn. Additionally, although various word lists have been created to guide

which word should be learned, there is a scarcity of research on how Thai teachers may use them to select appropriate words to teach.

In fact, EFL students in academic settings also need to know English academic vocabulary to learn academic English successfully (Phoocharoensil, 2015). Academic vocabulary is crucial for reading, and reading is the key to success at the tertiary level and an origin of incidental language learning (Pecorari, Shaw, & Malmström, 2019). Therefore, enhancing the English academic vocabulary knowledge of low proficiency students is necessary. However, academic vocabulary is much more difficult to learn than general conversation language because it is specific to academia and its meaning is abstract at times (Sibold, 2011). This abstract nature makes it unlikely to be acquired through incidental learning from exposure alone (Matsuoka & Hirsh, 2010). As academic vocabulary appears in textbooks, learners who perceive them as difficult will likely avoid reading and feel negative toward them (Pecorari, Shaw, Malmström, & Irvine, 2011). Despite vocabulary growth promoted by reading, learners who do not read enough cannot learn words that would help them accomplish language learning (Sibold, 2011). A study by Wiriyakarun (2018) displayed a fair performance of 53 non-English-majored Thai university students in Bangkok as their means scores were about half of the total scores of a test comprising 60 academic words from the first ten levels of Coxhead's (2000) Academic Word List. However, it is assumable that Thai students in different contexts will have different levels of academic vocabulary knowledge similar to the varying general vocabulary size as mentioned before, especially for low proficiency students. Academic vocabulary may be taught directly in class to help students understand the subject content as well as the word's inherent abstract concepts and multiple meanings (Matsuoka & Hirsh, 2010; Sibold, 2011).

Nevertheless, academic vocabulary occurs in lower frequency, and low-frequency words are covered only in a small amount of text, so they may not deserve class time for direct instruction (Ebadi, Weisi, Monkaresi, & Bahramlou, 2018). Only direct instruction of vocabulary cannot account for all the words acquired by L1 or L2 learners (Walter, 2004). Consequently, teachers should focus on teaching useful strategies to deal with low-frequency words (Nation, 2001).

Vocabulary learning strategies (VLS) are known to effectively help learners learn and expand word knowledge and become independent learners (Nation, 2001; Schmitt, Bird, Tseng & Yang, 1997). Mungornwong (2016) found that VLS best mediated vocabulary size to reading comprehension as its mediation was stronger than vocabulary depth and reading strategies. It means that VLS helped learners utilize vocabulary size to comprehend the reading text better than the other two factors did. Research studies have been conducted to investigate VLS employed by Thai learners and the results varied across contexts (Attachoo & Chaturongakul, 2015; Boonnoon, 2019; Chumworatayee & Pitakpong, 2017; Nirattisai & Chairamanee, 2014; Puagsang, 2018; Saengpakdeejit, 2014; Vo & Jaturapitakkul, 2016). Most research studies on VLS employed the survey method to see what strategies were used. However, Gu (2020) suggested that the "conception of learning strategies demands a much more situated and dynamic examination of VLS than the strategy tally approach that has been dominant," (p. 282) because a strategy involves many strategic actions. Moreover, Gu (2003) pointed out that language learners are likely to employ a combination of various strategies than using only one strategy. Thus, the present study incorporated four vocabulary learning strategies that were effectively employed by beginners as evidenced in recent empirical research.

The first strategy was analyzing affixes and roots, or word parts. Word part knowledge is important because English words consist of word parts and are morphologically and semantically related under word families; therefore, knowledge of word parts will help expand the number of learned words speedily (Sasao, 2013). Beginners who lack receptive word part knowledge and have limited vocabulary breadth may struggle to understand the information in words and contexts to solve unknown derivations (Webb, Sasao, & Balance, 2017). Since word part knowledge can be useful when learning lower-frequency words with semantically transparent derivatives (Sasao & Webb, 2017), it will likely help learners comprehend unknown academic words. Research by Varatharajoo (2016) showed positive results in teaching morphological analysis to ESL high school students with low English proficiency in Malaysia. Another study by Craigo, Linnea, and Hart (2017) showed that morphological analysis was one of the vocabulary learning strategies that helped multicultural community college students in the U.S. who had reading problems to comprehend expository texts. The researchers from these studies recommended teaching analyzing word part strategy to help learners in need.

The second strategy was analyzing part of speech or word class. Part of speech informs the grammatical function of a word, and the four major types are nouns, verbs, adjectives, and adverbs (Schmitt, 2000). Knowledge of part of speech helps learners know the patterns in which the word occurs and enable them to use the word in the correct grammatical patterns (Nation, 2011; Schmitt, 2000). It also helps learners learn and store vocabulary (Schmitt, 2000). Moreover, knowledge of part of speech facilitates teaching and learning collocations when they are introduced through the grammatical structure so that learners do not have to merely memorize words

(Palmer, 1933, as cited in Barnbook, Mason, & Krishnamurthy, 2013). Since collocations cover up to 50% of spoken and written discourse (Siyanova-Chanturia, 2015), learners can learn new word chunks and authentic language from collocations (Park, 2014). Empirical studies have demonstrated teaching collocations to beginners through part of speech. Siyanova-Chanturi (2015) studied the use of noun and adjective collocations of Chinese beginners studying L2 Italian and found that their usage of collocations in their compositions improved at the end of the course. Webb and Kagimoto (2009) taught verb and noun collocations to Japanese university students and found that lower-level students benefitted more from the receptive task.

The third strategy was guessing meaning from context. Sasao (2013) mentioned that guessing meaning from context strategy is probably the most preferred and frequently used strategy when learners encounter unknown words in context. They can use it flexibly in many situations as it does not require supporting materials such as actual word cards and flashcard software. Also, it could lead to incidental vocabulary learning while learners are reading and listening. However, Gu and Johnson (1996, as cited in Boonnoon, 2019) stated that low proficiency learners used this strategy less frequently than high proficiency learners, while Bengeleil and Paribakht (2004) found that both groups used this strategy almost equally, but low proficiency learners were less successful at it. Despite the tendency of the mismatch of this strategy with beginner learners, empirical research by Shahar-Yames and Prior (2018) showed that it is possible for them to use this strategy successfully when the texts are relatively easy and contain vocabulary at their level. Anvari and Farvadin (2016) studied the use of lexical inferencing strategy by Iranian students. They

pointed out the problematic use of the strategy and suggested training for less successful strategy users.

The last strategy was using a new word to form a sentence. Schmitt (1997) considered this strategy a means to consolidate the words that learners have met. It is a productive strategy that requires learners to utilize word meaning, part of speech, and possibly collocation and register. Research studying the effects of using a new word to form a sentence on vocabulary learning comes from the underlying concept of Laufer and Hulstijn's (2001) Involvement Load Hypothesis, which asserts that a task requiring high involvement from learners results in better word retention. Zou (2017) supported this claim by explaining that learners must remember and link information elements together. Furthermore, they must engage in pre-task planning both in their minds and on paper. Research by Park (2018) showed that both high- and low-proficiency Korean school students learned words from the sentence writing task better than a gap-filling task. Nevertheless, Stubbe and Nakashima (2017) found 19% mismatch of the pairings of the sentences incorporating the target words and the word's meaning translation by high-beginner Japanese university freshmen. This suggests that beginners can use this strategy but probably need more guidance.

Regarding teaching learners language learning strategies, Gu (2018) suggests employing the cognitive academic language learning approach (CALLA) by Chamot (2007) because it has been widely adapted and proven effective for language learners in EFL and ESL contexts. To determine the effectiveness of strategy use, Gu (2020) addressed the demand for research to illustrate the dynamic nature of using vocabulary learning strategies. Moreover, Gu (2017) suggested using formative

assessment of VLS to link language diagnosis and differentiated instruction which will improve learners' use of VLS and ultimately their vocabulary learning.

Dynamic assessment (DA) is an alternative assessment that combines assessment and instruction to provide individualized assistance or mediation to help learners reach their maximum development (Lantolf & Poehner, 2004). It is rooted in Vygotsky's (1978) zone of proximal development (ZPD) that learners can reach their optimal abilities with assistance of more capable others (Dörfler, Golke, & Artelt, 2009). DA focuses on using the interaction between the mediator (teacher) and the learner to simultaneously diagnose and enhance the learner's performance. The mediator usually provides graduated assistance such as questions or prompts attuned to the learner's responsiveness (Dörfler et al., 2009; Lantolf & Poehner, 2004). During the treatment, the learner will co-construct the knowledge with the mediator, and the mediator can diagnose the learner's underlying difficulty, remediate the source of difficulty, and assist sensitively to the needs (Dörfler et al., 2009). Simply put, the assessment function is foregrounded while the instruction co-exists (Infante & Poehner, 2019). The diagnostic function assesses the gap between the actual ability together with cognitive functions and potential future development whether in the short or long term (Jang & Wagner, 2014), while cognitive functions emerge and are internalized through the interpersonal, cooperative interaction (Kozulin & Garb, 2004; Lantolf & Poehner, 2004).

In terms of the DA format, Jang and Wagner (2004) mentioned that DA usually has a pretest, the mediated intervention, and a posttest, which is the same as what Dörfler et al. (2009) called a test-train-test design to improve the competence. The pretest measures learners' current cognitive ability, the mediated intervention is

tied to their future development, and the posttest measures their emergent cognitive ability (Jang & Wagner, 2014). Another design is a train-within-test design occurring while learners are doing the test and the mediator is guiding simultaneously to diagnose their strengths and weaknesses (Dörfler et al., 2009). The train-within-test design is commonly taken as the mediated intervention in the test-train-test design in many studies (Ableeva, 2010; Ebadi, Weisi, Monkaresi, & Bahramlou, 2018; Ebadi, Vakilifard, Bahramlou, & Hui, 2018; Hamavandi, Rezai, & Mazdayasna, 2017; Hidri, 2014; Mirzaei, Fani & Rashtchi, 2015; Shakibel, & Jafarpour, 2017; Siwathaworn & Wudthayagorn, 2018; Teo 2012a; Teo 2012b).

DA can be done individually with an individual learner or with a group or by the computer (Poehner & Lantolf, 2005; Poehner, 2009; Poehner & Lantolf, 2013). They are known as individualized DA, group-DA or GDA, and computerized DA or CDA, respectively and seem to emerge chronologically. Individualized DA has been conducted in an expert-novice or mediator-learner dyad since Vygotsky's time, but the model is unrealistic for classroom context where the teacher usually has many students in class. Therefore, GDA along with the notion of group zone of proximal development (ZPD) was investigated as the extension of Vygotsky's sociocultural theory (Poehner, 2009), but the research on it was quite limited and does not portray how group interaction led to the results. Later, computerized DA has been developed because the advantages of technology can solve the problems when human mediators are not available and when the time constraint is the major challenge in the classroom (Teo, 2012a; Yang & Qian, 2019).

In fact, DA can be categorized into interactionist and interventionist approaches following the way mediation is given (Lantolf & Poehner 2004). The

interactionist approach allows the teacher to assist a learner or a group flexibly, and the interaction could progress in unanticipated directions and rates. The teacher must be ready to provide appropriate types of mediation, assess when to withdraw it, and re-assist when learners cannot proceed (Landtolf & Poehner, 2005). The interactionist approach is suitable for analyzing microgenesis, or the emergence of language development during a single interaction, through a teacher-learner conversation. The interventionist approach employs hierarchical scripted prompts given by sequence to assess the amount of mediation that each learner needs by the number of prompts required. Thus, it is appropriate for comparing each learner's ZPD across the task (Poehner & Lantolf, 2013). As for group dynamic assessment (GDA), the interaction separates it into concurrent GDA and cumulative GDA (Poehner, 2009). In a concurrent GDA, each learner takes a turn to interact with the teacher simultaneously, while the teacher is moving the group's ZPD forward. In a cumulative GDA, on the other hand, each learner interacts with the teacher to the edge of his or her competence before the teacher moves to interact with another student with the same process. As a result, the teacher gathers the gain from each learner's ZPD to move the whole group's ZPD forward (Poehner, 2009).

Recent research studies using DA on vocabulary mostly compared vocabulary knowledge between learners in the experimental and control groups using a pretest and a posttest such as Hamavandi et al. (2017), Ebadi et al. (2018a, 2018b), and Mirzaei et al. (2017). Hamavandi et al. (2017), to begin with, compared the effects between a DA task of morphological analysis (DATMA) and the traditional Test of Morphological Structure (TMS) in increasing morphological awareness of vocabulary so that it would enhance reading comprehension. The results revealed that DATMA could improve and

predict learners' reading comprehension better than TMS. Ebadi et al. (2018b) studied the effects of computerized DA (CDA) on lexical inferencing. The scores showed that the learners in the CDA group outperformed those in the SA group in terms of lexical inferencing as well as transferring the skill to more challenging texts. Another study by Ebadi et al. (2018a) investigated the effects of CDA and noticing on vocabulary learning through reading. They compared the results from three groups: the CDA group who received graduated prompts and highlighted words, the group who studied with a Microsoft Word file with highlighted words, and the control group with no highlighted words. The results revealed that the CDA group scored the highest. As can be seen, the results were usually reported as a between-group comparison with quantitative data of the scores but did not explain an individual's learning process, challenges, conceptual errors, and sources of errors. In addition, although interventionist DA was used in these studies, which allowed comparing each student's ZPD in a task, no data were given to contribute to the understanding of such comparison, and they were only intermediate learners in these studies. Nevertheless, a study by Mirzaei et al. (2017) was conducted with beginning-level learners by using an interactionist, cumulative GDA to teach the depth of vocabulary knowledge. During the DA intervention, the teacher provided feedback to make the learners notice and correct the errors in the sentences that they translated from Persian to English by using the learned English vocabulary from direct instruction. The researcher used the first language during the teacher-learner conversation, which facilitated low English proficiency learners' comprehension according to supportive literature on code-switching (Almohaimeed, 2018; Ahmad, 2009; Anh, 2010; Carson & Kashihara 2012; Greggio & Gil, 2007; Liao, 2006; Weschler, 1997).

Jang and Wagner (2014) cast doubt on how the mediator assesses learners' actual or current proficiency level and whether there is a developmental theory to support the learners' progress. Therefore, future research on dynamic assessment should provide insights into learners' cognitive processes, the role of mediation such as graduated prompts and oral feedback to display the learner's developmental path. Furthermore, future research should accumulate abundant qualitative data of various states of knowledge and conceptual errors that the tasks elicited and analyze learners' cognitive strategies and processes.

It is worth noting that the present research acknowledged Jang and Wagner's (2014) recommendations and the lack of DA research on vocabulary to pursue such recommendations. Also, it realized the limitation of doing individualized DA in terms of the time needed, which would be impractical in an actual classroom setting. As a result, group dynamic assessment (GDA) seemed to be more practical and appropriate. Furthermore, research studies on GDA are still limited, and much work is required to understand its challenges and potential to guide assessment decisions and teaching (Poehner, 2014; Poehner & Infante, 2016) as well as the relationship between an individual's ZPD and the group's ZPD (Poehner, 2009). In addition, to acquire rich qualitative data on learners' cognitive processes, the DA approach must be flexible enough for data gathering. The interactionist approach seems suitable because it allows maximum attunement of the dialogic mediation to meet learners' needs (Aljaafreh & Lantolf, 1994). Concurrent GDA allows the teacher to flexibly reach and engage all the students in a group to participate.

In conclusion, this study aimed to investigate the effects of dynamic assessment (DA) on English academic vocabulary by using interactionist, concurrent

group dynamic assessment (GDA) for a group of low proficiency students. These students had little English background knowledge, so they needed assistance the most. Furthermore, equipping students with vocabulary knowledge was important because it supported the learning of the other English skills (Cook, 1993; Stæhr, 2008). DA seemed to be a suitable intervention for low proficiency students because DA follows Vygotsky's thought of education that it was not to record that learner performance was erroneous but to find the underlying causes to help learners set new developmental paths (Poehner, 2007). The original DA work was in special education and then its principles have been applied to diverse groups including learners who struggle in mainstream classrooms, minorities, immigrants, dementia patients, and prisoners (Poehner, 2007, 2014). In this study, the dynamic assessment (DA) and vocabulary learning strategies (VLS) were combined as a DA model that used DA tasks and prompts to induce the students to use VLS to learn academic vocabulary. Conceptually, it followed the suggestion on using research tasks to elicit and observe the dynamic nature of strategic learning (Gu, 2020), and it adhered to the DA principle to help learners reach their zone of proximal development (ZPD) through the mediator-learner collaboration. The study hoped to reveal learners' diverse states of knowledge, cognitive processes, conceptual errors, as well as challenges to provide a deep understanding of how DA can help low-proficiency students learn English academic vocabulary to their full potential. The students' attitudes towards their learning experience through the DA model were also explored.

1.2 Objectives of the Study

1. To investigate the effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge.

2. To explore students' attitudes toward the use of the dynamic assessment model on English academic vocabulary knowledge.

1.3 Research questions

1. What are the effects of the dynamic assessment model on low proficiency students'

English academic vocabulary knowledge?

2. What are students' attitudes toward the use of the dynamic assessment model on English academic vocabulary knowledge?

1.4 Scope of the Study

This study was a case study that used interactionist, concurrent, group dynamic assessment to enhance English vocabulary knowledge of Thai low proficiency undergraduate students. The participants were five second-year university students who had low English proficiency and retook the first English foundation course at the end of their first year. The context of the study was a small campus of a university in the North of Thailand. The independent variable was a dynamic assessment model that combined dynamic assessment and vocabulary learning strategies and was delivered through the cognitive academic language learning approach (CALLA). The model contained four DA tasks: a morphology task, a part of speech task, a guessing meaning from context task, and a sentence-writing task, all of which were accompanied by graduated DA prompts from the most implicit to explicit levels to help the participants complete the tasks. The dependent variables were English academic vocabulary knowledge and the students' attitudes toward the use of the dynamic assessment model. Data collection took place in the first semester of the academic year 2022.

1.5 Definition of Terms

    1.5.1 Dynamic assessment (DA)

Dynamic assessment (DA) is an alternative assessment that combines assessment and instruction. The assessment is not a test but occurs through the interaction between the teacher and learners. During the interaction, the teacher provides graduated mediation prompts and questions with awareness of learners' needs until they were able to answer correctly or come as close to the answer as possible. In doing so, the teacher assesses learner's actual ability and cognitive processes such as thinking and problem-solving and scaffolds learners to their maximum development (Dörfler et al., 2009; Lantolf & Poehner, 2004).

In this study, DA was in the form of an interactionist, concurrent group dynamic assessment (GDA) between the instructor and a small group of low proficiency students while they were learning academic vocabulary through four types of DA tasks, namely a morphology task, a part of speech task, a guessing from context task, and a sentence writing task. The assessment occurred when the mediator gave graduated, spoken mediation prompts to assess how much the students knew the concept. The prompts followed prefabricated mediation stages from the most implicit to the most explicit levels. The prompts for each task were different. They were adapted from Harris, Schumaker, and Deshler (2011), Aljaafreh and Lantolf (1994), Davin, Herazo, and Sagre (2017), and Teo (2012a). The interactionist DA approach allowed the prompts to be adjusted flexibly to suit the student's needs. Concurrent GDA allowed all the participants to jointly do all task items without waiting for their turns. The conversations between the instructor and the students plus the students'

non-verbal behaviors were recorded to analyze their cognitive processes while learning from the instructor and their peers in GDA.

1.5.2 English Academic Vocabulary Knowledge

English academic vocabulary knowledge refers to the knowledge of academic vocabulary for English for General Academic Purposes (EGAP), in which the academic vocabulary appears across academic disciplines (Coxhead, 2021). This knowledge is essential for learners at the university level to understand and express ideas clearly in an academic context (Pecorari, Shaw, & Malmström, 2019; Phoocharoensil, 2015). Like the knowledge of typical a word, the knowledge should include pronunciation, spelling, word parts, forms and meanings, concepts and referents, associations, grammatical functions, collocations, and constraints on use (Nation, 2011).

In this study, English academic vocabulary knowledge was the knowledge of selected academic words from the first 1,000 out of 3,015 words of Gardner and Davies' (2014) Academic Vocabulary List (AVL), which was intentionally created for beginners. Specifically, it was the receptive and productive vocabulary knowledge of certain constructs under the form, meaning, and use areas defined by Nation (2011). The knowledge was co-constructed between the instructor and a group of low proficiency students during dynamic assessment. The knowledge enhancement was qualitatively assessed by thematic analysis and was quantitatively measured with the pretest and posttest.

1.5.3 Low English Proficiency Students

Low English proficiency students are those who have little knowledge of English and have limited ability to learn new words, structures, and concepts in a

second language. Their cognitive processing of L2 is focal and controlled because they give notice to something specific such as a language form and an attempted message, and they can process a little information at a time (Brown, 2014). These students can comprehend meaning through keywords and may be able to make inferences based on prior knowledge. When communicating, they may resort to the first language and indicate a lack of understanding (ACTFL, 2015).

In this study, low English proficiency students referred to second-year university students in the North of Thailand who retook the basic English foundation course at the end of their first year. They received low academic vocabulary scores on the adapted academic vocabulary test, which was created from the Academic Vocabulary Test (AVT) of Pecorari et al., (2019). The low scores were judged by the negative standard deviations (S.D.) (Ishii & Schmitt, 2009), which indicated their inferior standing compared to all the students who retook the same course. In addition, they had mastered the first but not the second word family of the New Vocabulary Level Test (NVLT) of Webb, Sasao, and Balance (2017). The mastery was indicated by their ability to gain at least 86% of the level total score. Knowing less than 2,000 word families signified that these students were beginners (Milton, 2009).

1.5.4 Vocabulary Learning Strategy

Vocabulary learning strategies are applicable specifically for vocabulary learning. They empower learners to learn vocabulary independently (Schmitt, 1997) and expand their vocabulary knowledge (Nation, 2001). There are various vocabulary learning strategies. Schmitt (1997), for example, created a well-known taxonomy of vocabulary learning strategies that are categorized into strategies to discover a new

word's meaning and strategies to consolidate a word that has been encountered.

In this study, the vocabulary learning strategies included analyzing affixes and roots,

analyzing parts of speech, guessing meaning from context, and using a new word to form a sentence. They were selected from recent empirical research carried out with beginners. According to Schmitt's (1997) taxonomy, analyzing affixes and roots, analyzing parts of speech, and guessing meaning from context are strategies to discover a new word's meaning. Using a new word to form a sentence is a strategy to consolidate an encountered word.

1.5.5 Cognitive Academic Language Learning Approach (CALLA)

The cognitive academic language learning approach (CALLA) by Chamot (2007) is an instructional framework that is used to teach language learning strategies to language learners in ESL and EFL contexts (Gu, 2018). The approach consists of five stages including the stage of preparation, presentation, practice, self-evaluation, and expansion. The stages form an instructional sequence, but they can appear in a flexible order when the teacher considers it necessary to repeat some stages to suit the students' learning (Chamot, 2007).

In this study, CALLA was used as an instructional framework and was part of the DA model. All the stages were used in the intervention and some stages were repeated. DA tasks occurred in the stages of practice and expansion.

1.6 Significance of the Study

Theoretically, the findings of this study provide evidence of how interactionist, concurrent, group dynamic assessment (GDA) can help low proficiency students learn English academic vocabulary, shedding light on their cognitive

processes concerning the group's and individual's zone of proximal development (ZPD), the role of the mediation prompts, and vocabulary acquisition. It is one of the pioneers to contribute to GDA literature, particularly in the context of Thailand.

Pedagogically, this research guides teachers to implement GDA in their educational contexts to help low proficiency students improve their vocabulary learning. Also, teachers may tailor GDA for other English language skills and for student groups of different proficiency levels that need additional assistance. In addition, it may encourage teachers to employ DA, as an alternative assessment, to gain evidence for making decisions regarding student proficiency and learning potentials such as a pass/fail decision, the direction of the instruction, and the aids for learners.

Methodologically, this research provides empirical evidence on the development and implementation of GDA, the analysis of mediational interaction, and the analysis of the learners' attitudes while attempting to acquire the target language vocabulary. Future research may consider the pros and cons of the present research methodology, especially the GDA on vocabulary enhancement, and use them to inform the design of promising research studies on DA.

CHAPTER II
LITERATURE REVIEW

This chapter reviews existing theories and research regarding dynamic assessment and English vocabulary.

2.1 Dynamic Assessment (DA)

This section defines dynamic assessment (DA), describes its designs and approaches, and reviews previous DA research studies in English language instruction and assessment.

2.1.1 Definition of Dynamic Assessment

Dynamic assessment (DA) is a practice of combining teaching and assessment to maximize students' potential development by using the interaction between the mediator or the teacher and students to ensure learning. This is done by diagnosing learners' problems and solving them. The concept of dynamic assessment originated from Vygotsky's (1978) Socio-Cultural Theory (SCT) proposing that social interactions or activities with more proficient others helped individuals learn and move beyond their current knowledge or the zone of actual development (ZAD) to their maximum learning potential or the zone of proximal development (ZPD) (Dörfler et al., 2009). Vygotsky explains that developmental processes do not progress at the same pace as learning processes but are behind; consequently, this creates the zone of proximal development. Joint activity could reveal how much learners could do difficult tasks, how much mediation is required, and how well they respond to the mediation given.

To understand the root of DA, Vygotsky's (1978) Sociocultural Theory and the zone of proximal development should be looked into. Vygotsky considers human development as socially mediated rather than individualistic orientation, or the way a child learned under the adult's assistance. When a child tries to solve a problem beyond his or her ability, he or she uses language to ask adults to help through social interaction and later develops a skill needed to solve such a problem on his or her own. Vygotsky summarizes it as follows: "through speech, and in social relationships with others, that children learn to address themselves to the problem-solving required to complete their schoolwork, enter into social relationships, and later cope with familial, occupational, moral, and political problems" (p. 532). Gibbons (2002) adds that gained knowledge is supposed to extend to other contexts because a child learns how to think, not just what to think. For example, a father helps his child to complete a puzzle of a cat. He teaches how his child should learn to notice the size, shape, color, and pattern of each piece of the puzzle until later on the child can use this knowledge to complete other puzzles by himself or herself. As such, the learning process moves from other-regulation to self-regulation once it has been internalized, and the learner is able to do the task by himself or herself. In education, Vygotsky (1978) explains that, given further instruction, a child could develop from his or her current ability to his or her optimal ability. The difference between the current ability and the optimal ability is called the zone of proximal development (ZPD), and coordination with a more skillful person helps a child cross this cognitive distance from things that he or she could do alone to challenging things that previously he or she cannot without the help of others. In a classroom context, Fitzgerald and Graves (2004) explain that more knowledgeable people refer to teachers and peers, whereas

those outside classrooms could be anyone such as parents, brothers, sisters, relatives, etc.

In dynamic assessment (DA), the mediator or the more skillful person usually is the teacher and the less skillful person is the student. According to Poehner (2009), teaching is most effective when it is accustomed to the ZPD. Due to the fusing of teaching and assessment of DA, the teacher could diagnose learners' problems and attune the teaching to the ZPD. Poehner (2009) clarifies the relationship between DA and ZPD that "Vygotsky's formulation of the ZPD posits a dialectical relation between teaching and assessment. Offering learners mediation…serves simultaneous teaching and assessment functions, a diagnosis of abilities that are still in the process of forming as well as an intervention to support their development" (p. 480). Infante and Poehner (2019) further explain that assessment and instruction in DA "complete one another and change together in a process of cooperative, inter-psychological functioning that is ZPD activity" (p. 85). The aim of DA should not be misunderstood as it simply provides assistance to help learners complete tasks because its assessment function aims to diagnose learners' cognitive functioning and its teaching function aims to assist learners to reach their ZPD. However, the teaching in DA is considered metacognitive mediation following Karpov and Haywood's (1998) separation of mediation types in Vygotsky's writing as cognitive and metacognitive mediation. Cognitive mediation refers to the acquisition of cognitive tools to gain declarative knowledge about the concept and solve subject-domain problems. Metacognitive mediation, which comes from interpersonal communication, refers to the acquisition of semiotic tools to regulate oneself. In classroom DA, the teacher uses prompts as metacognitive mediation to regulate learners when they try to utilize concepts (Miller, 2011).

As a result, the concepts and how to use linguistic resources to convey meaning should be taught first, and DA as a form of other-regulation can help learners internalize the concepts during collaborative activities (Darvin, 2016). For example, research studies by Darvin (2016), Infante and Poehner (2019), and Poehner, Infante, and Takamiya (2018) have shown that learners have learned linguistic knowledge before taking part in DA, and DA helps them internalize the knowledge.

Previous studies have reported successful outcomes of using DA to promote different English skills such as reading (Fani & Rashtchi, 2015; Teo, 2012a; Teo 2012b), speaking (Siwathaworn & Wudthayagorn, 2018; van Compernolle & Zhang, 2014), listening (Ableeva, 2010; Hidri, 2014), writing (Poehner, Infante, & Takamiya, 2018), and vocabulary (Ebadi et al, 2018a; Ebadi et al., 2018b; Hamavandi et al., 2017; Hanifi, Nasiri, & Aliasin, 2016; Mirzaei et al. 2017), as well as multiple skills (Summers, 2008). Although DA is proven plausible for everyday diagnostic practice, the drawback lies in its affected fairness and reliability because the scores from DA do not reflect learners' solo performance as they result from learners and teacher working together to develop their full potential. In other words, the teacher deliberately changes learners' performance during the test (Dörfler et al., 2009; Siwathaworn, 2018). As such, DA contrasts with conventional assessment. Vygotsky considers the latter to reveal only a part of learners' capabilities because it does not reveal the abilities that are still emerging but not yet fully developed (Poehner, 2014). Simply put, the objective of DA is to enhance learners' full learning potential, not to focus on learners' total test scores to certify their learning or make decisions. Although the scoring issue is debatable, DA has been accepted (Poehner, 2009; Siwathaworn, 2018).

2.1.2 Design of Dynamic Assessment

Dynamic assessment (DA) is categorized into two designs: test-train-test and train-within-test. These two designs utilize educational mediation such as prompts and feedback to guide learners to reach their full potential. The teacher or mediator chooses the best possible DA design for intervention (Dörfler et al., 2009). Each design is described below.

1. Test-train-test design

This design consists of a pretest, training, and a posttest. During the training, learners are trained with the best strategies to understand the concepts and solve the problem related to the test (Dörfler et al., 2009). Poehner and Infante (2016) point out that it is similar to the classic experiment pretest-treatment-posttest design, and it has been used the most in psychological research. Dörfler et al. (2009) explain that the focus of the test-train-test design is on competence improvement. A parallel item in the posttest assesses whether learners have improved during the training. The benefit of this design is that it allows elaborated feedback and extensive training, but the drawback is it is time-consuming as the pretest and posttest are normally on separate days.

2. Train-within-test design

Another commonly used design has DA intervention embedded in the test itself; thus, support is readily available for each test item while learners are doing it. The prompts and hints will be provided from the most implicit to the most explicit level, and in some studies, they may be scripted beforehand and launched in a standardized sequence (Poehner & Infante, 2016). Dörfler et al. (2009) mention that the testing procedure of this design limits the time used, so the feedback must be

brief, specific, and simple enough for learners to know why the answer is incorrect and what to do next to get the correct answer. The focus of the train-within-test design is on competence diagnostics, so the teacher must consider individual differences. Figure 1 illustrates these two designs of dynamic assessment.

Test-Train-Test Design

Train-Within-Test Design
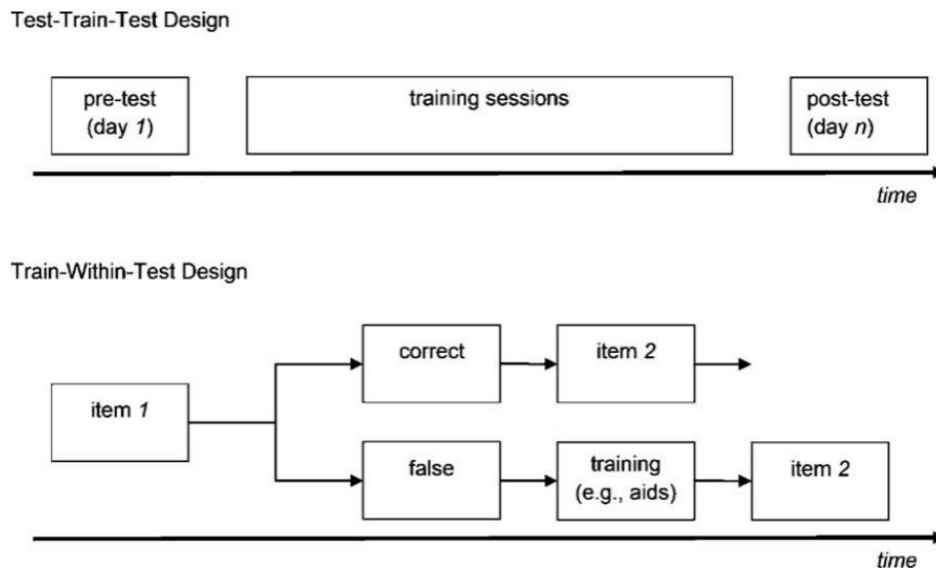
Figure 1 Two designs of dynamic assessment (Dörfler, Golke, Artelt; 2009, p. 78).

It is worth noting that in this study, the test-train-test design was employed because the researcher wanted to use test scores or quantitative data to supplement the results of the qualitative data from the training to determine the improvement of the students' vocabulary knowledge.

Regarding the ways the mediation is offered, Lantolf and Poehner (2004) propose categorizing DA into two approaches: interventionist and interactionist DA as follows.

1. Interventionist DA

The mediation in interventionist DA is conveyed in a standardized manner to evaluate

learners' responsiveness to determine the developmental levels (Lantolf & Poehner,

2004). Mediation is generally well-planned, formal, and standardized. For example, if an item is answered incorrectly, a prompt is provided immediately, and if the answer is incorrect again, another prompt is provided but it will be more precise. Simply put, the prompts will gradually move from implicit to explicit and the teacher often follows the prompts strictly. Specifically, such a pattern of mediation enables the teacher to assign weighted scores to their prompts; that is, the teacher often must score the training itself. Then the teacher can calculate the mediated scores by counting from the number of prompts given to help learners arrive at the correct answer. Consequently, the teacher can see the amount of support each learner needs in a numerical form and can compare quantitatively with those of other learners. A learner who needs a little assistance to solve an item would mean he or she has high learning ability (Dörfler et al., 2009). Moreover, Lantolf and Poehner (2004) state that interventionist DA would better suit large-scale testing situations; however, its standardization of prompts makes the interaction less sensitive to learners' rising needs. Recently, computerized dynamic assessment (CDA) has become more widely used because a large number of learners can take a test at the same time, and the prompts given follow the pattern of interventionist DA (Poehner & Lantolf, 2013).

2. Interactionist DA

The mediation in interactionist DA flows freely. It can be flexibly and informally adjusted to suit learners needs and responsiveness; in other words, the teacher does not script the mediation prompts in advance, but careful planning is necessary because the mediation still proceeds along the implicit to explicit continuum. Thus, the teacher must observe learners' actual performance at each moment carefully, so that the teacher can help them modify their performance due to

their responsiveness to the mediation. In addition, the teacher can predict the problems that learners may encounter based on the construct of the task. Given that interactionist DA prefers open-ended dialogic interaction between the teacher and learners, it normally gives qualitative profiles of learner development instead of counting the number of prompts provided precisely. Consequently, qualitative profiles are unlikely to be used to compare different learners. Interactionist DA seems to match classroom context than large-scale testing situations as it encourages teachers and learners to work collaboratively to identify and solve the problems as well as reflect on the outcomes. Although doing interactionist DA is laborious and time-consuming, the interactionist approach is more responsive to learners' ZPD and enables the mediator to adjust the assistance to learners' emergent needs easily (Lantolf & Poehner, 2004).

The designs and approaches of DA can also include an important feature called "transfer or transcendence" proposed by Feuerstein, Rand, and Rynders (1988). Transfer or transcendence refers to learners' ability to recontextualize their learning and apply it to more challenging tasks. Poehner (2007) mentions that DA supports learner development to continue to emerge as it follows Vygotsky's suggestion that true development can go further than a single assessment task, so the mediator should fine-tune their interaction to help learners do progressively complex tasks. Consequently, transfer tasks are built on the mediated task that learners have previously practiced, to see whether learners have internalized and sustained the development when doing more complicated tasks (Ebadi & Saeedian, 2016; Poehner & Lantolf, 2013). In other words, transfer tasks reveal the degree to which learners have developed; that is, they track leaner development. Thus, they should occur after

learners can perform with little help from the mediator in the regular task. However, the mediator assists learners to do the transfer task to make it successful learners' ZPD because learners' abilities and developmental needs are always happening (Poehner, 2007). Feuerstein et al. (1988) worked in an interactionist DA context and used various means to help the students do other tasks whose difficulty gradually increased. They noted qualitatively how much mediation the students needed to accomplish them. Poehner (2007) recommends transfer tasks to include activities such as reading, listening, and writing for learners to apply knowledge because Vygotsky and Feuerstein agree that development can manifest itself in many forms and is the heart of transfer or transcendence. Transfer tasks can be integrated with interventionist DA as well. Poehner and Lantolf (2013) covertly integrated transfer items in their Computerized DA (CDA) reading and listening comprehension test. The transfer items were similar to the other items regarding the response options, prompts, and constructs targeting comprehension. The only difference was the level of difficulty.

The following DA research could give an example of a DA design. Siwathaworn and Wudthayagorn (2018) employed a test-train-test design to improve the speaking skill of university students in English as a foreign context (EFL). The "train" part embedded the train-within-test design because the teacher was training the student while he or she was doing the test. In this study, the training was a one-on-one interactionist DA with a student. Ten students whose proficiency was in A2-A2 CEFR levels participated, and each student studied in six DA sessions. The speaking task was an elicited imitation (EI), which attempted to elicit the students' speaking performance by having them imitate speech. To do so, the students had to repeat each

sentence heard from the teacher (mediator) and repeat it by saying it out loud after a five-second pause to avoid the memory effect interfering. Each sentence lasted from six words to 15 words; for example,

"These new teachers aren't from Russia.

Could I have the sandwich but no apple juice, please?

The post office is opposite my school and on the left of the museum."

(Siwathaworn & Wudthayagorn, 2018, p. 147).

The mediation prompts are displayed in Table 1, starting from implicit prompts to explicit explanation, but the teacher could adjust it flexibly due to each student's needs, responses, and speaking errors. The result revealed that the mediation during DA helped students at the beginner level improve their speaking. Although the number of students was too small for statistical measurement, it indicated the continuous improvement of each one.

Table 1 *Mediation prompts for the elicited imitation task (Siwathaworn & Wudthayagorn, 2018, p. 148, adapted from van Compernolle & Zhang, 2014)*

Sequence	Mediation prompt for the EI task
1	Shaking head to show rejections, saying "try again," replaying the item
2	Giving the first hint (by naming the source of the problem e.g. sentence structure, pronunciation, vocabulary, meaning, etc.), replaying the item
3	Giving the second hint (more explicit than the second prompt), replaying the item
4	Correcting the response and giving explanation

The present study used the interactionist approach because it allowed the mediator to adjust the mediation flexibly to the students' performance. Moreover, since the study focused on qualitative data to reflect the students' cognitive processes, strategies, and conceptual errors, the interactionist approach was suitable as it could be more easily adjusted to the students' responsiveness.

2.1.3 Group Dynamic Assessment (GDA)

Although DA supporters strongly prefer doing DA individually with a learner to provide individualized assistance to each learner, it tends to be time-consuming and impractical for typical school language classrooms. Therefore, Poehner (2009) has explored a group DA (GDA) based on Vygotsky's (1998) idea regarding teaching a group although the idea was not elaborated in Vygotsky's paper. Group dynamic assessment (GDA) is the way the mediator or teacher co-constructs the zone of proximal development (ZPD) with a group of learners. Although Vygotsky's (1998) original work mentions GDA minimally, it is believed that GDA complies with the same principles of individual DA, but the mediation and focus extend to possibly the whole class. In doing so, the mediator can still negotiate with individual learners, but every act should be directed to the whole group. It is believed that GDA can solve the typical time-consuming issue of the one-on-one DA (Poehner, 2009).

There are two terms to distinguish the learners involved.

1. Primary interactants: a learner whom the teacher offers mediation in response to his/her difficulty. They negotiate the support that is needed.

2. Secondary interactants: the class and the other group members who have observed the mediation.

There are two ways to do GDA: concurrent GDA and cumulative GDA.

Poehner (2009) summarizes these two GDA approaches that "cumulative GDA attempts to move the group forward through co-constructing ZPDs with individuals, but concurrent GDA supports the development of each individual by working within the group's ZPD" (p. 478). The explanation of these two GDA approaches is described below.

    1. Concurrent GDA

As for concurrent GDA, the teacher converses with the whole class and may dialogue individually with a student (a primary interactant). However, if the situations allow for the other students (secondary interactants) who are observing the mediation to contribute such as asking questions, giving comments, and helping with the primary interactant's struggle, the teacher can switch quickly between them. In a concurrent GDA, Poehner (2009) explained that "the teacher's focus remains fixed on the entire class, and although he or she may call on a particular learner to answer a question, his next remark will be directed to another learner and will build on the preceding contribution" (p. 479). The fact that the teacher flowingly interacts with the primary and secondary interactants can be implied that concurrent GDA has no structure of mediation turns (Poehner, 2009). Concurrent GDA may sound like typical teaching-focused interactions; nevertheless, it provides teaching and diagnostic assessment simultaneously as mediation to support learners' development. An example of dialogic exchanges in a concurrent G-DA between a teacher and two learners named Beatrice (B) and Michelle (M) is taken from Gibbon (2003).

    Exchange 1:

    1. T: Tell us what happened.

    2. B: Em we put three magnets together/it still wouldn't hold the gold nail.

3. T: Can you explain that again?

4. B: We/we tried to put three magnets together…to hold the gold nail…even though we had three magnets…it wouldn't stick.

At this point, the teacher turns to another learner nearby:

Exchange 2:

1. T: Tell us what you found out.

2. M: We found out that the south and the south don't like to stick together.

3. T: Now let's/let's start using our scientific language, Michelle.

4. M: The north and the south repelled each other and the south and the south also repelled each other but when we put the/when we put the two magnets in a different way they/they attracted each other.

The prompts in these two exchanges progressed from implicit (as seen in Beatrice) to explicit (as seen in Michelle) as the teacher was directing the prompts to the whole class in the step fine-tuned to each learner's responsiveness. Both Beatrice and Michelle took turns to be primary interactants and Michelle's response was built upon Beatrice's response. However, this does not mean that Michelle was smarter than Beatrice. Poehner (2009) urges for further investigation on what impact the previous prompts have on the subsequent learners. The challenge of concurrent GDA is fairness in giving sufficient support to all learners.

2. Cumulative GDA

In cumulative GDA, the teacher converses with a learner (primary interactant) with the whole series of one-on-one DA interactions until a cognitive problem is solved while the other learners witness it as secondary interactants. By doing so, the

teacher can precisely determine the level of mediation each learner requires. Then, the teacher assigns another learner to take a turn being the primary interactant to solve the same kind of problem with the whole series of one-on-one interactions likewise. Undoubtedly, each subsequent interaction of the following learners will benefit from observing the previous interaction. In cumulative GDA, it could be concluded that the teacher accumulates the gain from individual learners' respective ZPDs to push the whole group's ZPD forward. Furthermore, unlike concurrent GDA, the mediation turns in cumulative GDA seem plausible to structure (Poehner, 2009). An example of cumulative GDA is from a Spanish teacher teaching 15-minute mini-lessons to fourth-grade students aged 9-10 years old. She asked each student to come in front of the class to play a cube-rolling game containing a picture of a Peru native animal while the class was watching him/her. Each student had to use the learned vocabulary to describe the animal and the grammar to agree with a substantive modifier. By doing so, the teacher could give mediation directly to each student individually and record the level of mediation each one needed. The teacher used a clipboard of a GDA mediation chart to fill in the types of interaction and the number of mediations given and commented on the problems encountered. Table 2 shows an example of the chart. The teacher used the recorded information to plan future lessons to match the changing needs and track the students' and class's development over time when they did more challenging tasks (Poehner, 2009).

Table 2 *The GDA mediation chart (Poehner, 2009, p. 482)*

Name	Interaction 1	Interaction 2	Interaction 3	Comments
Vincente Roberto	6			dos orejas cafe
Gabriela Manuel	3			dos ala gris
Amora Raquel	0			dos ojos negros

Based on Table 2, Vincente Roberto needed six interactions until he could solve the problem, Gabriela needed three, and Amora needed none. Gabriela could be more developmental than Vincente because she needed less explicit help; nonetheless, Poehner (2009) warns that Gabriela's need for fewer interactions could come from her mastery of the language focus before the lesson, so it cannot be concluded that she learned from Vincente's previous interaction with the teacher. Moreover, the performance of these three students differed regarding only the ZPD but not independent performance.

In conclusion, Poehner (2009) cautions that not every mediating move will significantly contribute to the development of all learners in the group. Additionally, the teacher cannot know whether the seemingly engaged secondary interactants are attentive. However, the purpose of classroom practice is that the group and each member are developing instead of making every mediating move benefit every learner. The development can be assessed by the responsiveness to support and independent performance. The contribution of GDA to L2 education is that "it renders classroom interactions more systematic and more attuned to learners' emergent abilities…Without a theoretically grounded framework for interactions, teachers are

left to follow an experiential or intuitive sense of how to support learner development" (p. 488). Therefore, feedback and questions can be intentionally graded from implicit to explicit to match learners' moment-to-moment developmental level.

As the main feature of GDA is a group of learners, Poehner (2009) lastly remarks that group cohesiveness, as well as individuals' relations, could be temporary for assigned activities rather than a permanent trait; thus, the teacher must deal with the challenge of creating pedagogical tasks and suitable mediation to promote the group cohesiveness. There are three notions of group work: the group as context, the group as cooperation, and the group as collective. In the group as context, individuals are only put in a group. As for the group as cooperation, each member has his/her own goals and understands the other member's goals. The group collective is the most desirable because everyone is working towards the same goal, and they see the essence in working for others the same as working for oneself and vice versa.

There is an attempt to compare the effects between group and individualized dynamic assessment. To begin with, Fani and Rashtchi (2015) compared the effects between concurrent GDA, cumulative GDA, individualized DA, and a control group on the reading comprehension ability of EFL Iranian undergraduate students, with 31 students in each group. The results revealed that the posttest mean scores of the three experimental groups with DA were significantly higher than the control group; however, there was no statistical significance among the experimental groups. Therefore, DA intervention, either group or individualized, had a positive effect on reading comprehension ability. However, when comparing the difference between the pretest and posttest mean scores, the individualized DA group outperformed the concurrent GDA and cumulative GDA group, but the difference was not statistically

significant. All in all, the researchers used this study to assert that GDA is feasible to implement with a group of learners.

In the present study, concurrent GDA was selected because it allowed the participants to do all task items rather than waiting for their turns in cumulative GDA in which each may do one or two items. Besides, since the intervention was short due to its nature of intensive tutorials, the participants would benefit more from doing than witnessing the others. They would be more active as they were expected to simultaneously do the tasks with the group, and the mediator could call for each one's attention anytime.

2.1.4 Related Research on DA

This section presents relevant research studies of group dynamic assessment (GDA),

individualized DA, and those employing DA to improve the vocabulary of university students.

2.1.4.1 Related Research on GDA

Research on group dynamic assessment (GDA) was first brought up by Poehner (2009) which led to several studies investigating GDA in a classroom context. Those studies are presented in reverse chronological order. Bakhoda and Shabani (2019) combined computerized and group DA to be computerized-group dynamic assessment (C-GDA), which was a human-computer collaboration, to teach reading strategies to improve reading comprehension of twelve intermediate students whose ages were between 19 and 24 years old in Iran. The researchers mentioned the gap in computerized DA that it could engage learners at an individual level but could not account for a group of learners' needs in the classroom; as a result, a human

mediator was present to guide the group. Thus, C-GDA was led by a computer program showing the reading passages, questions, and prompts in an interventionist approach, and the human mediator in interactionist concurrent GDA was to guide the group by selecting a student who answered incorrectly to consider the given computerized prompt and stated his/her reasoning of what the correct answer would be before all students selected the answer again. If there was still a wrong answer, another computerized prompt appeared, and the process continued until all the students answered correctly. The results showed that the group's ZPD grew as the group needed fewer computerized prompts for the subsequent reading texts. The researchers mentioned that the advantage of the human mediator asking the group members if they agreed with the selected student's answer helped compare the group's ZPD and the individual's ZPD. The neutral reaction from the group could signal that they were still analyzing the answers and waiting for more explicit prompts, and the cooperation from the other group members helped them find the correct answer. The interactionist mediations for the group were analyzed after the intervention and were found congruent with Aljaafreh and Lantolf's (1994), Poehner's (2005), and Ableeva's (2010) regulatory scales. Table 3 summarizes the mediations.

Table 3 *Interactionist mediation (Bakhoda & Shabani, 2019, p. 42)*

Mediations	Examples from mediator-learner interactions over the five texts
1. Confirming/rejecting response	You are right so it means that/ the word *tectonics* is not important.
2. Leading questions	Can you remember what was offered by the

	computer to help you?
3. Metalinguistic prompts	When this paragraph talks about the most, the previous paragraph talks about?
4. Identifying a problem area	The two lines related to each other.
5. Definition of keywords in English	*Solar* means something that related to sun.
6. Definition of keywords in Persian (learners native language)	*Aggressive* means tahajomi (Persian word)

Another study by Poehner, Infante, and Takamiya (2018) addressed mediational processes in individual, peer, and group contexts to support learner L2 writing. Although it did not address group dynamic assessment (GDA), the research introduced how a student's error, which was regarded as emerging knowledge, was treated in peer mediation and a whole-class discussion. A Japanese university lecturer of a Japanese writing course in the U.S. used DA to identify the students' linguistic features that were unresponsive to the instruction and to create opportunities for the students to gain greater control of their language use. The lecturer asked her seven Japanese-majored English-speaking students to write the first draft, and then had a one-on-one DA interactionist session to diagnose each student's problem in writing and group them according to their common language problems. Then, the lecturer designed tutoring packets containing their errors for the groups to solve during the peer mediation. After that, the groups shared their discussed items with the class while the lecturer mediated the whole class. The research presented a group of three students helping each other with the Japanese passive voice. The interactions of all the

processes were mainly in Japanese but English was also used. The data analysis showed the benefit of students helping each other discuss and correct the same error types but noted that the lecturer's expertise was needed to guide peer mediation as the groups could miss the target linguistic feature and proceed in the wrong direction.

Davin (2016) extended her study from earlier research studies by Davin (2013) and Davin and Donato (2013) in which a primary school teacher employed DA to improve Spanish interrogatives for 4th and 5th graders. The researcher examined the teacher's records of the student development from cumulative GDA with the students' performance during small group work and suggested several valuable points. During ten days of instruction, there were four GDA sessions and three sessions of small group work to form a list of questions. The data were collected from three sources: first, the teacher's record of the level of explicitness of prompts that each student required and the nature of error that they made while replicating a slot-filler template for forming questions; second, transcripts of the records from the four GDA sessions; and third, transcripts of the record of two highly participatory students. The results revealed that the teacher's records of the prompts used could not claim the students' understanding of forming Spanish interrogatives beyond the slot-filler template. A student not requiring prompting may have given the teacher a false impression that he or she became self-regulated, since the data from small-group work showed that one student could not form questions beyond the slot-filler syntactic template while the others could. Therefore, the researcher suggested that future research include Mahn's (2015) suggestion of phases that the teacher can probe the learner's awareness of the concept, voluntary control of the concept (volition), and organization of the concept (systematicity) to examine if the concept development is happening. Moreover,

student participation was not equal in cumulative GDA. While some joined all four sessions, some joined one and others chose not to participate. In addition, the researcher found that the GDA sessions and small-group work were not sufficient to help some students to understand the concept and suggested individual intervention. Last but not least, the researcher suggested teaching concepts as cognitive mediation, as metacognitive mediation, before classroom DA so that DA can mediate the students' conceptual understanding sufficiently.

A study by Davin (2013) illustrates data analysis when real-life classroom interactions were beyond the scope of the pre-scripted DA prompts. The researcher demonstrates that two frameworks including cumulative group dynamic assessment (GDA) and the instructional conversation (IC) complemented each other when the teacher mediated 4th and 5th grade primary school students to form Spanish questions. The teacher selected a cumulative approach for GDA to track the student progress systematically and to make her responses systematic for all her 200 students. In each class of around 20 students, the teacher spent 15 minutes for each student to be primary interactants going through a whole series of one-on-one DA interactions while the others observed as secondary interactants. There were five levels the prompts ranging from implicit to explicit: 1) "pause with questioning look," 2) "repetition of entire phrase by teacher with emphasis on source of error," 3) "repetition of specific site of error," 4) "forced choice option (i.e. ¿qué? or ¿quién?)," and 5) "correct response and explanation provided" (Davin, 2013, p. 310). However, there were occasions where her pre-scripted prompts did not apply due to the students' questions and less predictable errors. These occasions made the teacher interact with the whole classroom and used flexible mediation instead. The researcher

analyzed these occasions under the IC framework that stressed instructional needs instead of the assessment needs. The forms of assistance in instruction conversations (IC) included modeling, feeding back, contingency managing, directing, questioning, explaining, and task structuring (Tharp & Gallimor, 1991). The researcher summarized that a teacher may use the IC framework to teach new or unfamiliar concepts to students and use the DA framework to assess the concepts that have been covered because the two frameworks complement each other.

2.1.4.2 Related Research on Individualized DA

Research by Rahimi et al. (2015) employed interactionist individualized DA to resolve the misunderstanding of the conceptual L2 writing skills such as brainstorming, outlining, and topic sentences. Three advanced sophomore students in Iran produced ten pieces of writing and took ten individualized DA sessions with the teacher to review their writings. The teacher spoke to the students in the native Persian language to ensure intelligibility and adopted the twelve-level DA prompts which were used to guide the student's writing in Aljaafreh and Lantolf (1994). The researcher assigned the employed prompts into levels two to five on an implicit continuum and levels six to twelve on an explicit continuum. The regulatory scale is shown in Table 4.

Table 4 *The regulatory scale from implicit to explicit levels (Aljaafreh & Lantolf, 1994, p. 471)*

0	Tutor asks the learner to read, find the errors, and correct them independently, prior to the tutorial.
1	Construction of a "collaborative frame" prompted by the presence of the tutor as a potential dialogic partner.

2   Prompted or focused reading of the sentence that contains the error by the learner or the tutor.

3   Tutor indicates that something may be wrong in a segment (e.g., sentence, clause, line) - "Is there anything wrong in the sentence?"

4   Tutor rejects unsuccessful attempts at recognizing the error.

5   Tutor narrows down the location of the error (e.g., tutor repeats or points to the specific segment which contains the error).

6   Tutor indicates the nature of the error, but does not identify the error (e.g., "There is something wrong with the tense marking here").

7   Tutor identifies the error ("You can't use an auxiliary here").

8   Tutor rejects learner's unsuccessful attempts at correcting the error.

9   Tutor provides clues to help the learner arrive at the correct form (e.g., "It is not really past but something that is still going on").

10 Tutor provides the correct form.

11 Tutor provides some explanation for use of the correct form.

12 Tutor provides examples of the correct pattern when other forms of help fail to produce an appropriate responsive action.

Each student's data were analyzed qualitatively and tabulated to display the levels of prompts required in each individualized DA session until they understood the target of the mediation. The results showed that DA could help the teacher diagnose the students' sources of problems and develop them from their weaknesses. The researcher noted that the students had different ZPDs and responsiveness to the mediation, which could have resulted from their baseline knowledge. The teacher

should use DA to help weaker students in the classroom and future research should devise transfer tasks to add more evidence of development.

Another research study by Poehner (2007) employed individualized DA and emphasized the importance of transcendence or transfer. Poehner did individualized DA with two advanced 4th-year English-speaking undergraduate students of French in the U.S. to compose oral narratives. The students studied grammar rules of perfect and imperfective aspects in class but still could not use them correctly, so the researcher administered DA to supplement classroom activities with regular and transfer tasks. Two transfer tasks were added following Vygotsky's view that true development surpasses a single assessment task. The material for the regular task was a scene from a comedy movie with dialogue and action. The first transfer task was a war movie that required learners to use specialized vocabulary and the second transfer task was a written text. The mediator spoke English, the native language, with the students to ensure they understood. Two one-on-one cases with students: Donna and Jess were presented. The results showed that both performed similarly during the regular task but differed in the transfer tasks. Donna could sustain her grammar use but Jess could not. The level of mediational support given to each student during the transfer task also identified their different levels of functioning. Donna could almost perform independently as she needed only the mediator's presence and approval, but Jess showed confusion and needed more mediation such as translation of the grammar structures into English. The researcher concluded that the transfer tasks exposed the varying degree of student development. In Donna's case, the mediator-student collaboration even led to another grammar point beyond the focus.

2.1.4.3 Related Research on DA and Vocabulary

Recent research affirms the benefits of dynamic assessment (DA) on vocabulary learning, a number being reviewed in this section. To begin with, Ebadi et al. (2018a) compared the effects of CDA and noticing on vocabulary learning through reading among intermediate students who studied Persian as a foreign language. They were in high school to master's degree levels, and their first languages varied. The students were divided into three groups. The first group studied with CDA in which unfamiliar words were highlighted and hints were provided. The second group studied words in a Microsoft Word file with unfamiliar words highlighted but without hints provided. The control group studied words in a Microsoft Word file, but the unfamiliar words were not highlighted, and no hint was provided. The results from the immediate and delayed posttests revealed that the mean of the CDA group was the highest, and the mean of the second group was higher than that of the control group. The researchers concluded that CDA and noticing the text's unfamiliar words promoted vocabulary learning from reading and suggested doing the same experiment with either low or advanced-proficiency students. Again, this is another study that provides only quantitative data to support CDA due to its research design, so it does not portray the learning processes with DA.

Furthermore, Ebadi et al. (2018b) compared the effects of computerized DA (CDA) and static assessment (SA) to explore whether CDA better improved lexical inferencing, helped transfer this skill to more difficult texts, and promoted the acquisition and retention of inferred words. The participants were Persian native speakers who were high school and undergraduate students aged between 16 and 24 years old. Their English proficiency was at the intermediate level. They were selected

based on their vocabulary sizes of 2500–2800 words by the Vocabulary Size Test of Nation & Beglar (2007). The students in the experimental group did CDA where they read to infer the meaning of the target words and chose the best paraphrase option. The steps of CDA are as follows:

- If they answered correctly, 4 lexical inferencing points were awarded to them.

If the answer was incorrect, the software provided the first hint to inform the learners that they answered incorrectly and had to try the item again.

- In the second attempt, if they answered correctly, 3 points were awarded.

If the answer was incorrect, the second hint highlighted the relevant parts in the text to provide an implicit hint.

- In the third attempt, if they answered correctly, 2 points were awarded.

If the answer was incorrect, the software provided a more explicit hint: some written guidance explaining the relationship between highlighted parts and the target word.

- In the fourth attempt, if they answered correctly, 1 point was awarded.

If the student still answered incorrectly, the correct answer was provided, and the student received no points.

When the students finished reading, they had to answer the comprehension questions.

The results showed that CDA better improved the students' lexical inferencing than static assessment and helped the transfer of lexical inferencing skill in the near transferred tasks, the immediate posttest (acquisition), and the delayed posttest (retention), but not in the far transferred tasks. The CDA scores, which were given

based on each student's attempts to answer, were calculated to compare with his/her pretest score. It was found that although some students gained the same pretest scores reflecting their similar ZADs (zone of actual development), their mediated scores varied according to their ZPDs (zone of proximal development). The researcher suggested that teachers should group students according to their ZPDs and plan suitable instruction for them (Ebadi et al., 2018b). As can be seen, the train-within-test DA intervention was inserted in the pretest and posttest experimental design. When the experimental group studied with CDA, each student did a one-on-one, interventionist DA with the computer program. However, this study focused on the results of the CDA group compared to the static assessment group and reported them quantitatively. It did not portray the qualitative details of individual students' learning process taking place while doing the dynamic assessment.

Hamavandi et al. (2017) investigated the effect of the DA task of morphological analysis (DATMA) on EFL learners' reading comprehension. The participants were at an intermediate level at the age between 14 and 18 years old. The experimental group was taught with a DA procedure, whereas the control group was taught with a list of words following the syllabus. Additionally, this study compared the predictive ability of DATMA scores and the traditional Test of Morphological Structure (TMS) scores on EFL learners' reading comprehension. The results showed that DATMA improved learners' reading comprehension and could predict their reading comprehension improvement better than TMS. Below are the script and steps of doing DATMA as well as the scores given to the mediation.

"Examiner: I will tell you some words and you tell me their meanings. I will also show you the word in written form. If some of the words are hard, I will give you some help. Are you ready?

(1) Tell me what the word cookery means (paused 10 s).

(2) If the learner answered correctly, the mediator would say: How did you know that? If the learner responded incorrectly, the mediator would proceed directly to

step 3. (Unless the learner has referred to the individual morphemes).

(3) Does the word cookery have any smaller parts? What are those parts? (pause 10 s; if the learner cannot respond or it is incorrect, the mediator would proceed to step 4. If the learner is correct, the mediator would ask: Now can you tell what the word means?)

(4) The smaller parts in this word are cook and ery. Now can you tell what the word means?

(5) Listen to this sentence and then tell me what cookery means (the sentence is provided).

(6) Which of these choices gives the best meaning of the word? (The mediator presented three choices) (Hamavandi et al., 2017, p. 5).

A scoring system of the gradual hint was developed to record individual differences in the degree of needed assistance to answer the word correctly. The following shows how the scores were assigned to each hint.

"5 points = the language learner answered #1 and #2 correctly and completely

4 points = the language learner explained the word correctly after prompt #3.

3 points = the language learner explained the word correctly after prompt #4.

2 points = the language learner explained the word correctly after prompt #5.

1 point = the language learner explained the word correctly after prompt #6.

0 points = the language learner did not explain the word correctly"
(Hamavandi et al., 2017, p. 5-6).

Unfortunately, the researchers did not describe the design and approach of DA in this study. It may be considered as a train-within-test DA embedded in a pretest and a posttest experimental design for improving reading comprehension. The scores assigned to each prompt implied that it was an interventionist DA, and the training was likely done in a group; however, the study did not specify whether it was concurrent or cumulative GDA. Moreover, the study did not provide qualitative data on the group's performance, nor did it show how the overall DATMA scores of all items were calculated, because only the group's reading scores from the pretest and posttest were reported. Therefore, the study did not explain the group's ZPD and the individual's ZPD.

In the fourth study, Mirzaei, Shakibel, and Jafarpour (2017) used interactionist, cumulative GDA to teach the depth of vocabulary knowledge measured by a five-level, self-reported vocabulary knowledge scale (VKS) by Paribakh and Wesche's (1996). The participants were junior-high-school, Iranian, EFL beginners selected based on Oxford Quick Placement Test (QPT) scores. They were divided into the experimental group and the control group. In the beginning, both groups received traditional instruction to teach the target words including reading the words aloud for correct pronunciation, teaching definitions, synonyms, and Persian equivalents, and studying different sentences containing the words. Then, both groups had to translate 15 Persian sentences into English by using the newly taught English words as much as

possible. Their sentences were the data source that the teacher speculated their current developmental level (zone of actual development). During the DA intervention, the experimental group was provided with cumulative GDA feedback to notice and correct the errors in their sentences. The control group received direct, explicit correction of their erroneous parts without scaffolding. The results showed that the students in the GDA group outperformed those in the control group in both the immediate posttest and delayed posttest. Furthermore, the qualitative data from audio-recording were used to analyze microgenesis; that is, student development during a single interaction. The results showed that cumulative GDA could help students move from other-regulation to self-regulation and develop learning potential on the depth of vocabulary knowledge at the individual and whole class levels (Mirzaei et al., 2017). Although this research provided examples of Persian (L1) dialogues to facilitate the understanding during the teacher-student interaction, the constructs assessed were questionable as correcting a written sentence involved knowledge of syntax, and the microgenesis provided was about correcting grammar. Furthermore, although the pretest and posttest scores revealed gain in the depth of vocabulary knowledge, it is doubtful whether the self-reported vocabulary knowledge scale (VKS) should have been used as an achievement test. Waring (2020) criticizes that the scale mixed different types of knowledge as shown by the verbs: remember, have seen, don't know, know, think, can use, so the knowledge construct was unclear as it ranged from no knowledge to productive knowledge. What is more, the self-rated data obtained from the scale were a nominal type; numerical scores were not given or made to become a scale type for calculating the vocabulary score.

In another study, Hanaifi et al. (2016) used group dynamic assessment (GDA) to teach technical vocabulary in ESP reading passages to a group of electronic engineering students in a quasi-experimental research design with no control group. The results showed an increase in the posttest score. However, the research only showed the quantitative results of scores but did not provide details of the GDA intervention such as the length of the intervention and the examples of interaction. Also, it did not identify whether the GDA was a concurrent or cumulative type. The format of the vocabulary pretest and posttest was not clarified either. Therefore, it may not contribute much to the understanding of how GDA helped the students learn the vocabulary.

In conclusion, dynamic assessment (DA) is the simultaneous administration of assessment and instruction to help learners reach their maximum learning potential with the mediator's assistance. The different designs (test-train-test and train-within-test), approaches (interactionist and interventionist), and formats (individualized DA, group DA, and computerized DA) allow teachers to flexibly select DA that suits their contexts. With its effectiveness supported by prior empirical studies, DA seems promising to contribute to classroom assessment and instruction. However, more research employing DA and vocabulary is still needed.

The next section investigates the related properties of DA and conversational features.

2.1.5 DA and Related Conversational Features

Since this study intended to use the interactionist DA approach to mediate low proficiency students to learn English academic vocabulary, the study relied heavily on interpersonal collaborative interaction, which marks the unique characteristic of DA

(Lantolf & Poehner, 2004). Consequently, the conversation between the teacher (mediator) and the students was a highly important data source. This section clarifies the similarities and differences between DA and related conversational notions and features including assessment conversations, scaffolding, and feedback.

2.1.5.1 Assessment Conversations and Interactionist DA

According to Ruiz-Primo (2011), classroom conversations are the main tool to collect data in informal formative assessment. When the purpose of classroom conversations is for assessment, then they are called assessment conversations and proposed as a pedagogical strategy by Duschl and Gitomer (1997). Assessment conversations disclose what and how learners think so the teacher can act upon them. Assessment conversations and instructional dialogues are two sides of the same coin; that is, they are conceived similarly when the dialogues include assessment of occurring classroom activities (Ruiz-Primo, 2011).

Assessment conversations relate to interactionist DA because interactionist DA employs dialogues/conversations to mediate learners, which is known as the term "dialogic mediation" used by Poehner (2014). Conversations permit exchanges between the expert and the less proficient ones such as between the teacher and learners. This narrows the cognitive distance between what learners can do alone and what they can do with assistance from the teacher, and what they can learn and do from these exchanges (Hogan, 1997, as cited in Ruiz-Primo, 2011, p. 18). When assessment conversations are administered to the whole class, the teacher can incorporate one learner's previous response or comments and use it to form the next questions for others. The contribution that the previous learners made helps other non-participating learners who are observing reach a new level of understanding.

Occasionally, the benefits of assessment conversations are the teacher's and peer's feedback or evaluation given indirectly to the observing learners who witness the dialogic interactions (Ruiz-Primo, 2011). This is similar to the concept of group dynamic assessment (GDA) in that the teacher co-constructs the zone of proximal development with a learner group, and the secondary interactants learn from the interaction between the teacher and the primary interactants. Additionally, when learners have made errors while engaging in assessment conversations, the teacher can use a strategy called debugging to guide them through indirect hints and questions to enable them to notice and correct the errors by themselves. If the debugging fails, the teacher can model the right answer (Ruiz-Primo, 2011), which is quite similar to mediation in DA since it avoids direct explanation but guides learners to build their knowledge.

However, assessment conversations or informal formative assessment are different from DA. Can Daşkın and Hatipoğlu (2019) distinguish informal formative assessment from other types of classroom-based assessment (CBA) that are administered by interaction. Conceptually, CBA is an umbrella term that includes different types of assessment related to classrooms including dynamic, diagnostic, and performance-based assessments which are designed differently from one another. Poehner and Lantolf (2005) differentiate dynamic assessment (DA) from informal formative assessment in that the former is systematic and theory-based since its mediation is attuned to learners' responsiveness and it simultaneously assesses and promotes development. Mediation prompts, feedback, and questions are graduated from implicit to explicit and are contingent to learners' emergent abilities (Poehner, 2009). In contrast, informal formative assessment is unsystematic and unpredictable

in classroom interaction. Can Daşkın and Hatipoğlu (2019) add that it includes only the language ability that contingently occurs out of formally designed classroom activities. Moreover, Rea-Dickins and Gardner (2000) caution that informal formative assessment could overestimate or underestimate learners' ability and misinform the teacher causing improper instruction or no instruction when required. This led Poehner and Lantolf (2005) to point out that DA reduces the probability of wrong evaluation because of its systematic adjustment. In conclusion, assessment conversations are part of interaction-based classroom assessments which differ in purposes and designs.

2.1.5.2 Scaffolding and DA

Scaffolding is a term originated from Vygotsky's sociocultural theory (1978). In classroom, it means important, temporary assistance from a more skillful person to help learners successfully complete a task and learn new skills and concepts. Once learners know how to do something by themselves, scaffolding is withdrawn. Thus, it is temporary by nature (Gibbons, 2002). One important thing is that new knowledge taught should not be beyond the capacity of learners; in other words, it is within their zone of proximal development (ZPD). The teacher must build on things that learners can do individually (Gibbon, 2002). Thus, it poses a challenge on the teacher to investigate the readiness of each learner and decide when and whether to scaffold or to let them try through error by themselves (Tally, 2014). While scaffolding is generally understood as giving support, it is not simplifying the task or adopting a reductionist curriculum to meet the low expectations of learners. They should do authentic, cognitively challenging tasks and receive enough support to carry out the tasks (Gibbon, 2002; Tally, 2014). Wilson and Devereux (2014) have argued that

scaffolding is not a plain synonym for support. Rather, it is the nature of support that is important. They agree with Mariani's (1997, as cited in Wilson & Devereux, 2014) model of scaffolding as "high challenge, high support." Learners should be challenged with tasks that are appropriately above their current ability and receive high support from more competent others. If they do high-challenge tasks but with low support, they will become frustrated, lose confidence and interest, and might choose a short-cut to plagiarize. On the other hand, low-challenge tasks with high support would become busy work; in other words, large quantities of sub-tasks would reduce the intellectual level of learners. Lastly, low-challenge tasks with low support are perceived as irrelevant, pointless, and boring. In addition, Wilson and Devereux (2014) caution that the increase in diversity of learner body and the wider access to tertiary education placed more demand for effective scaffolding of academic literacies.

It is obvious that both scaffolding and DA originated from Vigotsky's sociocultural theory (SCT) and are means to help learners reach the zone of proximal development (ZPD). Poehner and van Compernolle (2011) explain that the term scaffolding is pervasive in current discussions of curriculum and instruction and formative assessment. It represents good teaching which the teacher firmly regards as expertise in giving increasingly explicit mediation until the task is completed. However, scaffolding lacks the theoretical basis of when to offer or withhold support and how to calibrate the degree of support to let learners experience some struggle before helping them to the ZPD. Although scaffolding shares similarities with DA practices, DA researchers have minimally used the term scaffolding because DA has emphasized on giving systematic mediation such as scripted sets of mediating

prompts in many cases. Moreover, Lantolf and Thorne (2006) separated DA mediation from scaffolding based on the goal. DA mediation is to lead learners to concept development while the scaffolding is the learning of specific steps to successfully complete the task. Nonetheless, Darvin and Donato (2013) point out that scaffolding task completion and DA are not exclusively distinctive as both unite learning and development. Scaffold is used in the early stages of DA sessions to diagnose learners' ZPD and to guide the subsequent mediation to develop a conceptual understanding of a certain aspect of language either aimed for the intervention or emerging spontaneously. In addition, their research suggested that classroom DA can be complemented with small-group tasks with peer scaffolding. The main characteristics of peer scaffolding found were repetition and use of first language. Repetition in scaffolding was used to signal an error, share the understanding, encourage, and help, whereas repetition in DA is often for signaling an error. L1 was used to start and maintain small-group work, especially for lower-level learners to build collaborative dialogue.

2.1.5.3 Feedback and DA

Feedback in DA is the mediation or assistance provided to promote the learners' self-regulation such as correcting their errors with the teacher's mediation (Herazo, Davin, & Sagre, 2019). In this section, the level of feedback, corrective feedback, and the uptake of feedback are discussed.

Regarding the level of feedback, direct or explicit feedback is the one given directly, while the indirect or implicit or facilitative feedback is the one given indirectly (Aljaafreh & Lantolf, 1994; Bitchener, Young, & Cameron, 2005). For example, direct feedback explicitly addresses an error and provides its corrected form

while indirect feedback addresses an error with no corrected form provided. The feedback that is used to correct errors is called corrective feedback. Panova and Lyster (2002) divide corrective feedback into different types: recast, clarification request, metalinguistic feedback, elicitation, explicit correction, and repetition. Recast is the reformulation or expansion of an ill-formed utterance in an inoffensive way. It is implicit feedback. A clarification request is an elicitation to make learners clarify their ambiguous language. Metalinguistic feedback is to comment, inform, or ask learners to think of the well-formedness of their utterance such as a reminder of using the right tense for the intended meaning. Elicitation makes learners to self-correct. Explicit correction is the direct indication of the wrong form and provision of the correct form. Repetition is when the teacher repeats the ill-formed part with the intonation changed. As corrective feedback deals with errors, taking Brown's (2001) distinguishing mistakes and errors might be useful for the teacher. Mistakes or local errors are performance slips, which can be left uncorrected but errors or global errors are competence errors, which need treatment even as little as a clarification request from the teacher.

As for the uptake of feedback, Jang and Wagner (2014) identify factors that impact the use of diagnostic feedback: individual, context, cultural influences, and individual background. Regarding the individual factor, learners interpret external feedback with their beliefs and goal orientation. They evaluate the feedback validity and change their perceptions about learning progress and strategies. Dweck (1986) creates a goal orientation theory to differentiate between mastery-oriented learners and performance-oriented learners. Dweck (1986) Dweck and Leggett (1988) explain that learners who hold a mastery goal-orientation enjoy challenging tasks and accept

diagnostic feedback to improve their competence. However, those who hold a performance goal-orientation are likely to avoid challenging tasks and seek easier ones to reach success. Moreover, performance-oriented learners who think they have low ability may see it as irremediable. They may view diagnostic feedback on their weaknesses negatively as it brings shame, anxiety, and boredom which lowers self-esteem and devalues the task. Therefore, Hoska (1993, as cited in Jang and Wagner, 2014) suggests that diagnostic feedback should reorient learners to see that efforts can improve ability and that failure and mistakes are part of the developmental path. The second factor that affects learners' use of feedback and goal orientations is the learning and assessment context. Highly competitive and performance-oriented classroom environments might create adverse effects from the feedback given (Jang and Wagner, 2014). Thus, classroom environments should provide an opportunity for learners to improve their skills rather than focus on grades or scores (Ames, 1992). The last two factors including cultural influences and individual background are reflected in the teacher's delivery of feedback. Still, interpreting learners' use of feedback should not rely on stereotypes. (Hyland & Hyland, 2006). Jang and Wagner (2014) recommend that future research develop a rich analysis of the interactions between learner differences and the social context of assessment, and mentioned that research addressing learners' roles in the uptake and use of feedback is insufficient.

DA proponents have given useful remarks on feedback and DA. If the product of learning is the goal rather than the process, explicit corrective feedback should be preferable. Nonetheless, DA favors the process to yield development that arises from learners' responsibility and control. Such development moves from other-regulation to self-regulation. Hence, explicit corrective feedback impedes the determination of

how much regulation learners are developing, which conceals or stops the process of development. Furthermore, DA targets ZPD, and ZPD needs both implicit and explicit mediation which is regulated by learners' responsiveness to teacher mediation (Aljaafreh & Lantolf, 1994; Lantolf & Poehner, 2010). For example, Aljaafreh and Lantolf (1994) exemplify 12 levels of assistance from the most indirect or implicit to the most direct or explicit feedback representing a continuum from learners' self-regulation in detecting errors to the teacher's regulation in providing examples for clarification. Moreover, Jang and Wagner (2014) suggest that immediate feedback plays a vital role in DA especially for low-proficiency learners when they are working on challenge tasks because their cognitive load can be lowered when tasks are scaffolded with facilitative or indirect feedback.

2.2 English Academic Vocabulary

This section describes English academic vocabulary in four folds including vocabulary knowledge, English academic vocabulary, vocabulary teaching and learning, and vocabulary assessment.

2.2.1 Vocabulary Knowledge

Word definition and the aspects of vocabulary knowledge are discussed in this section. Read (2000, p. 1) defined words as "the basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraphs, and whole texts are formed." Stahl (2005) mention that vocabulary knowledge implies knowing both word definition and its appropriate use in the four main skills to communicate in the world. In terms of linguistics, Fromkin, Rodman, and Hyams (2017) contend that the word meaning is presented in the mind or what is called the mental lexicon, although it is challenging to specify precisely. Thus, the meanings are

not the same as in a conventional dictionary but consist of reference and sense. The reference is the association with the referred object, and the object itself is called the referent. The sense is the additional elements of meaning that contain "the information needed to complete the association and to suggest properties that the referent may have, whether it exists in the real world or the world of imagination" (Fromkin et al., 2017, p. 149).

In terms of vocabulary knowledge for speakers of other languages, Bogaards (2000) suggests learning lexical units instead of words. The aspects of lexical units include form, meaning, morphology, syntax, collocates, and discourse, which encompass the knowledge of style and register for particular discourse. Qian (2002) creates a framework of vocabulary knowledge to cover four fundamentally intertwined dimensions: vocabulary size, depth of vocabulary knowledge, lexical organization, and automaticity of receptive-productive knowledge. Vocabulary size is the number of words of which learners have at least partial knowledge. Depth of vocabulary knowledge includes characteristics of words, i.e. phoneme, grapheme, morpheme, semantics, syntax, collocation, phraseology, frequency, and register. The lexical organization includes storing, connecting, and representing words in a learner's mental lexicon. Lastly, automaticity of receptive-productive knowledge involves the necessary processes to access word knowledge for receptive and productive use, including encoding and decoding phonology and orthography, retrieving structural and semantic features from the mental lexicon, integrating and representing lexis and semantics, and parsing and composing morphology. However, the factors in each dimension vary in their strength depending on different receptive and productive processes. Nation (2011) summarizes the nine constructs of

vocabulary knowledge under the most basic level consisting of form, meaning, and use areas as displayed in Table 5. The distinction between receptive and productive terms is represented by the letters R and P, respectively. Generally, receptive word learning and use tend to be easier than productive one (Nation, 2011).

Table 5 *The nine constructs involved in knowing a word (Nation, 2011, p. 27)*

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
	Word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express the meaning?
Meaning	Form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concept and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	Associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this

		one?
Constraints on use (register,	R	Where, when, and how often would we expect to meet this word?
frequency…)	P	Where, when, and how often can we use this word?

2.2.2 English Vocabulary Word Lists

In this section, classifications of words are described to prepare the ground for understanding academic vocabulary. First, the word-family lists are discussed to understand word frequency and then differences between the word family and lemma are illustrated. Next, academic word lists are described and compared and followed by the reasons to choose a particular academic word list in this study.

2.2.2.1 The Word Family Lists

Nation (2001) classifies four types of vocabulary based on frequency in a text. They are high-frequency words, academic words, technical words, and low-frequency words.

- High-frequency words are words that appear the most frequently and cover almost 80% of the running words in the text. They include function words and content words.

- Academic words are words that commonly appear in different kinds of academic texts and cover around 9% of the running word.

- Technical words of a particular subject area are common in such an area but not in the others. They cover about 5% of the running words in a text.

- Low-frequency words cover more than 5% of the words in an academic text, but they are the biggest group of words in the language. They include words that are almost included in the high-frequency list, proper nouns,

words for other subject areas, and words that are rarely met.

Nation (2006) organizes millions of English words by frequency and creates the 14 1,000 word family lists based on 100,000,000 tokens, known as running words or the unit of counting every word, in British National Corpus (BNC) (Nation & Beglar, 2007). The purpose is to include all the most frequent and important words necessary for English reading and listening of authentic materials to estimate the number of words needed to comprehend such materials. The first 1,000 words and the proper nouns tend to vary the text coverage to the greatest extent, and it is estimated that 98% of text coverage is needed for unassisted comprehension, which means a language learner should possess 8,000 to 9,000 word families for a written text and 6,000-7,000 for a spoken text (Nation, 2006). Remarkably, BNC includes a considerable number of spoken languages, which are 10 million running words, and roughly 4.2 million of them are from informal conversation (Brezina & Gablasova, 2015). To understand the accountability of each frequency level, Nation (2006, p. 79) illustrates the percentage of word coverage as shown below:

"1.   …The first 1,000 plus proper nouns cover 78%-81% of written text, and around 85% of spoken text.

2.   The fourth 1,000 and fifth 1,000 words provide around 3% coverage of most written text, and 1.5%-2% coverage of spoken text.

3.   The four levels of the sixth to ninth 1,000 provide around 2% coverage of written text and around 1% coverage of spoken text.

4.   The five levels of the tenth to fourteenth 1,000 provide coverage of less than 1% of written text and 0.5% of spoken."

The up-to-date word family lists nowadays are the BNC/COCA word family lists which contain headwords from the 25,000 the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA) (Nation, 2020). The lists are designed for learners of English as a foreign language (EFL) as the primary target users and consist of 28 word family lists. Most of the survival vocabulary and 319 of 570 families of Coxhead's Academic Word List (AWL) are in the first 1000 list, while 473 of 570 families are in the first to third 1000 lists. The words reflecting EFL learners' purposes such as studying English, foreign traveling, the Internet, course books, and graded readers appear early in the lists. Specifically, the first and second 1,000 word family lists are established from both spoken and written words in British and American spoken English, movies and TV programs, fiction, and texts for young children are included. Thus, these two word family lists in the BNC/COCA contrast with those from the BNC because the latter is largely influenced by the formal written nature of the corpus. In summary, the BNC/COCA word lists are suitable for designing a language course and teaching English as a foreign language.

There are two things to consider when choosing words from the word family lists. First, they include both general words and academic words (Nation & Beglar, 2007). However, general words and academic words can be separated. Second, the difference between a word family and a lemma affects the word lists chosen for beginners and intermediate learners. Word families combine members of both inflectional and derivational affixes. In contrast, a lemma is a stem form (the headword) and inflections of the same part of speech of the headword only, for example, the stem "pause" (noun) includes pause (n.) and pauses (plural n.) (Stoeckel, Ishii, & Bennett, 2020). Thus, a word family is bigger in the number of the included

words than a lemma and can consist of more than one lemma. For instance, the members of the word-family "abbreviate" include two lemmas. The first one is the "abbreviate" lemma consisting of abbreviate, abbreviates, abbreviated, and abbreviating, and the second one is "abbreviation" lemma consisting of abbreviation and abbreviations. The rationale behind the use of using word-families is that "when reading and listening, a learner who knows at least one of the members of a family well could understand other family members by using knowledge of the most common and regular of the English word-building devices" (Nation, 2006, p. 67). Therefore, it seems appropriate to measure receptive vocabulary size, because learners who have some knowledge of word-building devices, or morphology, understand the relationship of regularly affixed members. As a result, the vocabulary size test by Nation and Beglar (2007) is built following the rationale of the word family.

However, there has been constructive criticism of the word lists by word families particularly the issue of meaning transparency (Brezina & Gablasova, rachel; Gardner & Davies 2014). This issue is due to the semantic distance of the family members under the same word family. For instance, to train (v) and trainers (n = shoes), please (v/adv) and unpleasantly (adv), and part (n/v/adj/adv) and particle (n). As can be seen, meaning problems occur because the word family does not separate grammatical parts of speech. More examples are the words proceeds (v = continues) and proceeds (n = profits) are gathered under the same word family (Gardner & Davies, 2014). As a result, it seems that learners must rely on morphological skills, or word-building devices, to understand the family members. To do morphological analysis, learners must rely on existing vocabulary knowledge, which, unfortunately, is limited for beginners (Nagy, 2007). Consequently, beginners have not mastered

morphological skills to understand the inflectional and derivational affixes to use word families (Brezina & Gablasova, 2015; Gardner & Davies 2014). In addition, second language adults and school children attain derivational affixes such as those forming nouns and adjectives much after inflectional suffixes that indicate grammar properties (Gardner, 2007; Nippold & Sun, 2008). In conclusion, several scholars advocate lemmas, which refer to words from the same stem, of the same part of speech, and linked by inflectional suffixes only, to be used for pedagogical word lists for beginners and intermediate learners of English instead of word families (Brezina & Gablasova, 2015; Gardner & Davies 2014; Schmitt & Zimmerman 2002).

2.2.2.2 Academic Word Lists

This section describes the background of the academic word list and the four recent academic word lists, namely, Coxhead's (2000) Academic Word List (AWL); Browne, Culligan, and Phillips's (2013a) New Academic Word List (NAWL); Gardner and Davies' (2014) Academic Vocabulary List (AVL); and Oxford Phrasal Academic Lexicon (OPAL) by Oxford Learner's Dictionary. These four academic word lists are considered of contemporary use. Then, the comparison of the four lists is discussed followed by the reasons to choose an appropriate list for this study.

Academic word lists are the compilation of the most frequently occurring academic words from various academic disciplines for teaching and learning academic vocabulary as well as research (Therova, 2020). Two main approaches guide the creation of academic word lists. The first approach is to set the academic words as an appendage of the general high-frequency words by assuming that learners have already learned the general words. This first approach is employed for Coxhead's (2000) AWL and Browne et al.'s (2013a) NAWL. The second approach

does not assume that learners have previously mastered general words. The second approach is employed in Gardner and Davies' (2014) New Academic Vocabulary List (AVL) and Oxford Phrasal Academic Lexicon (OPAL) by Oxford Learner's Dictionaries. Both approaches have the advantage of establishing the most prevalent academic words (Therova, 2020). These four lists are general academic word lists to be used across various academic disciplines. However, the caution is that learners may misunderstand that studying one or more of these academic word lists would be enough for every field (Hyland & Tse, 2007). Durant (2016) cautions learners to consider them following their premise to merely show more useful words than others. The four academic word lists are discussed in detail as follows.

A. The Academic Word List (AWL)

Coxhead (2000) has developed the Academic Word List (AWL) consisting of 570 words from Coxhead's (1998) academic corpus consisting of around 3,513,330 million words or written academic texts. The corpus included four subcorpora: arts, commerce, law, and science; each has seven subject areas. 64% of texts were from New Zealand, 20% from Britain, 13% from the USA, 2% from Canada, and 1% from Australia. As for text coverage, AWL covers around 10% of its source academic Corpus (Coxhead, 2000). Nevertheless, Coxhead (2016) mentioned two new lists representing progress in the academic vocabulary area: one was by Browne, Culligan, and Phillips (2013a) and the other was by Gardner and Davies (2014)

B. The New Academic Word List (NAWL)

The New Academic Word List (NAWL) is built after the creation of their New General Service List (NGSL) and excludes the words from NGSL (Browne, Culligan, and Phillips, 2013a). It comprises 960 academic words. The corpus for creating

NAWL is of 283 million words by including academic texts from the Cambridge English Corpus (CEC) (86.3%), well-known academic textbooks (12.6%), and an oral corpus (1.1%) created by MICAS (Michigan Corpus of Academic Spoken English) and BASE (British Academic Spoken Corpus) (Therova, 2000). In terms of coverage, the coverage of the NAWL is not reported alone but together with NGSL, and both cover 92% of the source corpus. Given that NGSL covers 86% of the source corpus, it is assumable that NAWL covers the other 6% (Therova, 2000). In addition, as the NAWL is more recent than Coxhead's (2000) AWL, Browne et al. (2013b) state that when the NGSL and NAWL are combined, they produce around 5% more text coverage than when General Service List (GSL) by Buaman and Culligan (1995) are combined with the AWL. What is ambiguous about NAWL is that the methodology is unspecified, but it may have been created with a modified lexeme approach the same as NGSL. Nevertheless, Therova (2000) points out the disadvantage of this approach that it combines different parts of speech of words with inflection suffixes, which can result in grouping words with different meanings.

C. The New Academic Vocabulary List (AVL) by Gardner and Davies (2014)

Gardner and Davies (2014) develop the new Academic Vocabulary List (AVL) from a 120-million-word academic subcorpus of the Corpus of Contemporary American English (COCA) of 425 million words. The subcorpus includes nine academic disciplines: education; humanities; history; social sciences; philosophy, religion, psychology; science and technology; medicine and health; and business and finance. The enormous size of 120 million words is almost 35 times larger than Coxhead's (AWL). Unlike the AWL which uses word families to select words, the

AVL uses lemmas to select word forms, functions, and meanings more accurately, because lemmas count only words with inflectional suffixes of the same part of speech. The final product consists of 3,015 lemmas or around 2,000 word families. The methodology for deriving the list is thorough (Therova, 2020). Gardner and Davies ensure that the source corpus, from which the list is derived, represents contemporary English. In addition, they have tested the validity and reliability of the list by testing it against academic and non-academic corpus. Their methodology to select academic words excludes general high-frequency words and discipline-specific and technical words.

D. Oxford Phrasal Academic Lexicon (OPAL) – Written Words

OPAL is developed by Oxford Learner's Dictionaries to provide the most important words that learners should know for academic writing and speaking. It consists of four word lists: written words, spoken words, written phrases, and spoken phrases. To compare single academic words, the written words of OPAL are to be explained. They include 1,200 words organized into 12 sub-lists. Each sub-list contains 100 words. Each word is shown with its part of speech. Sub-list 1 has the most important words and is recommended for beginners while sub-list 2 has the next most important words, and so on. The corpus used to derive the written words is the 71-million-word Oxford Corpus of Academic English (OCAE) comprising academic texts published by Oxford University Press in four subject areas: physical sciences, life sciences, social science, arts, and humanities. The methodology to select words is keyword analysis to pinpoint the most important words in academic settings and is not based on any general word lists. The words in OPAL are automatically linked to Oxford Learner's Dictionary of Academic English and Oxford Advanced Learner's

Dictionary. Thus, when learners click the word, they are directed to the dictionaries'
websites to learn the word meaning, usage, and example sentences (Oxford Learner's
Dictionaries, 2021). However, little detail is known about the methodology. Besides,
no percentage of coverage in the source corpus is reported (Therova, 2020). The
comparison of all academic word lists is in Table 6.

Table 6 *The taxonomy of academic word lists (adapted from Therova, 2020, pp. 9-10)*

Name	Coxhead's (2000) AWL	Browne et al.'s (2013) NAWL	Gardner and Davies's (2014) AVL	Opal single written words
Appendage to	West's (1953) GSL	Browne et al.'s (2013) NGSL	None	None
Corpus size	~3.5 million	283 million	> 120 million	71 million
Source corpus/text	- 414 academic texts in 1960s-1990s in NZ Britain, USA, Canada, Australia	- Academic CEC (86.3%) -Textbooks (12.6%) - Oral Corpus: MICASE and BASE (1.1%)	- 13,000 recent academic texts from the COCA	- Academic texts published by Oxford University Press
Methodology	Range, Frequency, and Specialized occurrence	Not specified	Ratio; Range; Dispersion; Discipline measure	Keyword analysis

| Size and organization | 570 words families (3,110 word types) with 10 sub-lists | 960 words in alphabetical order with inflected forms | 3,015 lemmas (~2,000 word families) placed by frequency | 1,200 words with 12 sub-lists |
| Reported coverage | 10% of the source corpus | NGSL+NAWL = 92% of the source corpus | 13.8% of the source corpus | Not reported |

In this study, the academic words were from Gardner and Davies' (2014) AVL for several reasons. First, it does not assume that learners already know general high-frequency words and it is not an appendage to any general word list. As this study aimed to help low proficiency learners, it assumed that they may not master all general high-frequency words. This list includes high-frequency words from academic texts that learners need to know. Second, its corpus size is considerably large as it is the second-largest among the four lists, which adds more credibility because the words are derived from an enormous number of academic texts. In addition, the source texts are rather up to date as recent as the year 2011. Third, the methodology to create the list is thorough without subjective judgment. Fourth, because it is created by using lemmas, this could eliminate the confounding meaning-distance issues of word families including all parts of speech under the same headword. Users can be certain that the lemmas in the list, with a specific part of speech, represent the most frequent meaning of such academic words. Last, it provides reported coverage of its corpus. In short, these reasons seemed to sufficiently justify the use of the AVL in the present study.

2.2.3 Vocabulary Teaching and Learning

This section covers four topics: vocabulary comprehension, principles of vocabulary

teaching and learning, vocabulary learning strategies for beginners based on empirical

research, and strategy instruction framework (CALLA) that was used in this study.

2.2.3.1 Vocabulary Comprehension

This section discusses the topics related to vocabulary comprehension in terms

of the L2 acquisition process and intralexical factors that make words easy or difficult

to understand.

A. L2 Acquisition Process

Jiang (2004) explains that L2 vocabulary acquisition consists of two

dimensions. The first dimension is related to vocabulary size or breadth. It focuses on

the status of a lexical entry in the mental lexicon including the first registration of a

word in the memory, retention, consolidation, and automatization. The emphasis is on

knowing the meaning of new words. The second dimension is referred to as

vocabulary depth or richness. It focuses on the refined content of a lexical entry

including the expansion and enrichment of lexical information. Learners are involved

in the processes that help them know more about words such as a word's form

properties yielding better pronunciation and morphosyntactic properties yielding the

correct use of a word in various syntactic environments.

Furthermore, Jiang (2004) mentions that knowing the meaning of new words

is a developmental process, which can be divided into two stages: the comprehension

stage and the developmental stage. The comprehension stage is the first understanding

of a word's meaning or the mapping of lexical form and meaning. Pavičić Takač

(2008) points out that L2 vocabulary acquisition is unlike L1 vocabulary acquisition as L2 learners already possess well-established conceptual and semantic systems connected to L1. Thus, L2 acquisition usually arises from mapping the new L2 words to the pre-existing L1 conceptual meaning or translation equivalent, especially in the initial stages of acquisition. Jiang (2004) adds that this mapping occurs regardless of the teaching technique used to teach the new words. When learners understand the meaning of the L2 word, a strong link between L2 and L1 is formed although L1 is not used in the meaning-making process. The goal of the comprehension stage is to understand the main meaning of the new words within the pre-existing semantic system or concept. In contrast, the developmental stage requires learners to develop semantic content specific to L2 or restructure the contents that are transferred from L1 because the translation equivalents of L1 and L2 may not yield the same semantic properties. The goal of the developmental stage is for learners to check the original content of a new word against its other meanings in different contexts.

Adult language learners rely on L1 to understand new L2 words (Jiang, 2004; Nation, 2011; Swain & Lapkin, 2000), so the influence of L1 on L2 acquisition is discussed. According to Swan (2001), some kind of equivalent hypothesis such as the matching between L1 and L2 is likely to happen especially in the early stages of second language learning because making crosslinguistic correspondences helps learners manage to learn new languages. As a result, L1 influence contributes to errors and correct forms in an interlanguage. However, the equivalent hypothesis can fail for many reasons. Some are shown in the following.

- Learners may simply misinterpret a word or expression of a new language.

- Learners may interpret the reference of a new word correctly but cannot understand

 all its semantic and structural properties.

- The words in the two languages are not exact equivalents. Each might have more than

 one translation.

- Different parts of speech between the two equivalents can raise serious problems.

- Some L2 words may not have L1 equivalents at all, and learners may overlook them

 because they are difficult to manage.

- In some cases of language production, the L2 words that learners produce do not

 cause errors but may be inappropriate in style. Alternatively, learners may

 systematically avoid L2 counterparts that are less congruent with their L1. For

 example, a Chinese learner would rather use "yield" rather than "give in."

Swan (2001) explains that word-storage strategies in the bilingual lexicon could account for consistent errors of L2. Words are held in memory with the network of associations. The network between words in one language is augmented by connections with words in the other language. Meara (1984, as cited in Swan, 2001) suggest that different languages may prefer different techniques to store and handle words. When L1 and L2 are poorly matched, it seems possible that ill-adapted strategies for handling words would result in inappropriate L2 entries in memory and

create difficulty for learners. For instance, English learners may fail to store French genders and Chinese tones properly to learn new words.

B. Intralexical Factors of a Word

Laufer (2001) outlines the intralexical factors or the intrinsic properties of the word, which might affect its learnability related to the word's form and meaning. In other words, they can make a new non-native word easy or difficult for learning. Table 7 summarizes some intralexical factors that affect the learning of words.

Table 7 *Intralexical factors which affect vocabulary learning (Laufer, 2001, p. 154)*

Facilitating factors	Difficulty-inducting factors	Factors with no clear effect
Familiar phonemes	Presence of foreign phonemes	
Phonotactic regularity	Phonotactic irregularity	
Consistency of sound-script relationship	Incongruency in sound-script Relationship	
		Word length
Inflectional regularity	Inflectional complexity	
Derivational regularity	Derivational complexity	
Morphological transparency	Deceptive morphological Transparency	
	Synnoformy	
		Part of speech
		Concreteness/abstractness

Generality	Specificity
Register neutrality	Register restrictions
	Idiomaticity
One form for one meaning	One form with several Meaning

According to Table 7, Laufer (2001) clarifies that learners' L1 system highly determines the ease or difficulty of the phonology of the new non-native word because learners need the ability to discriminate the phonemes. Phonotactic regularity or a familiar combination of phoneme features is to help in knowing, saying, and remembering the word. Regarding inflections and derivations, Milton (2009) notes that the regular and the most frequent inflections and derivations tend to be learned first and they generally are lemmas. Laufer (2001) further clarifies that irregular inflectional features such as plural forms and verb tense forms make words difficult to learn because learners must bear more learning load on complex forms. Derivational complexity resulted from the lack of regularity of which morphemes can combine and the multiple meanings of the combination can create difficulty for learners. For example, "preview" is right but "anteview" is wrong, and "overthrow" can mean both turning over and bringing destruction to something. A deceptive transparency word is a special case of difficulty because it looks as if it consists of meaningful morphemes, but it does not such as "outline" and "discourse." All in all, the ability to decode a word's morphemes can indeed promote recognizing a new word and producing it later. Synoforms are lexical forms that share similar characteristics. General synoforms are similar in the number of syllables, syllabic position of a segment, stress

patterns, and part of speech. Specific synforms include ten categories but the most problematic is the same form with different suffixes such as intelligible/intelligibility, nutrition/nutritious, and the same consonants but different vowels such as adopt/adapt, proceed/precede. However, Laufer (2001) suggests that the teacher should warn learners not to heavily rely on word morphology when practicing guessing word meaning from context and not to interpret the sentence meaning based on individual words because some words may be pseudofamiliar; that is, they look familiar but they do not. The word's meaning should be analyzed with a wider context.

2.2.3.2 Principles of Vocabulary Teaching and Learning

Many scholars have proposed ways for effective vocabulary teaching and learning such as Hunt and Beglar (2002), Coxhead (2000), Nation (2006), Nation (2011), Schmitt, Bird, Tseng, and Yang (1997), Schmitt (1997), and Watts (1995) to name a few. Coxhead (2000) suggests ways to teach academic vocabulary that teachers can use the Academic Word List (AWL) to set vocabulary goals for English for Academic Purposes (EAP) courses. They can judge the density of academic words and low-frequency words in academic texts and adapt the texts to suit the proficiency of their learners. Moreover, a well-balanced course should provide opportunities to study words through direct teaching such as teacher explanation, exercises, word cards, and incidental learning, including seeing the words in massage-focused reading and listening and using them in speaking and writing. Finally, teaching prefixes, suffixes, and stems could help learners learn the AWL as more than 82% of them are from Greek and Latin.

Hunt and Beglar (2002) suggest three approaches to vocabulary teaching and learning: incidental learning, explicit instruction, and independent strategy

development, each is presented in principles. As this research study aimed to help low proficiency students acquire new words, the literature review emphasizes learners in the beginner level.

The first approach, incidental learning, is presented in principle 1 below.

Principle 1: Learners should have opportunities for extensive reading and listening.

To familiarize learners with extensive reading, teachers should devote some class time for them to read silently for a sustained period. After they develop a sustained reading habit, they should do extensive reading out of class. However, incidental vocabulary learning also has restrictions because L2 beginning learners may not benefit from it because they have limited vocabulary knowledge that prevents them from reading extensively (Nation, 2002). Therefore, low-proficiency should read graded readers as they contain a great deal of high-frequency vocabulary (Hunt & Beglar, 2002). Recent research by Sabbah (2018) shows that incidental learning is appropriate for all proficiency levels as the results revealed that advanced students performed incidental word learning equally well as low-ability students. Finally, incidental learning seems to occur by implicit instruction because it requires abundance of contexts and exposures to the target vocabulary items (Nation, 2001).

The second approach, explicit instruction, is presented in principles 2, 3, 4, and 5.

Principle 2: Teachers should diagnose which of the 3,000 most frequent words learners should study.

Hunt and Beglar (2002) refer to a suggestion made by Laufer (1992) that the minimum number of 3,000 words is for effective reading at the university level and

5,000 words for academic success. This number encompasses the 2,000 high-frequency words in West's (1953) GSL and 800 general academic words in Xue and Nation's (1984) University Word List. The priority of learning the high-frequency word is stressed in Nation (2006, p. 63) as "it is assumed that both native- and non-native-speaking learners acquire vocabulary largely in the order of its range and frequency. High-frequency and wide-range words are generally learned before lower-frequency and narrower-range words." In sum, Hunt and Beglar (2002) suggest estimating the vocabulary size of learners.

Principle 3: Learners should have opportunities to learn vocabulary intentionally.

Learners need to listen to the pronunciation and practice saying the words aloud. The stress and syllable structure are the means to store the words in memory. They should learn semantically unrelated words, and teachers should avoid teaching words with similar forms and close meanings. Furthermore, studying words in several short consecutive sections is more effective than in one or two long sessions, and repetition and review should follow the newly learned word immediately. Five to seven words should be learned at a time, so teachers should divide a large group of words into small groups, and newly learned words can be linked to previously learned words and a relationship should be formed (Watt, 1995; Prince, 1996). Additionally, word information can be added such as parts of speech, sentence examples, and keyword images. Last but not least, teachers should employ activities that promote a deep thinking process and retention. Schmitt et al. (1997) mention modern psycholinguistic research that thinking deeply about the word or using a high level of cognitive effort is essential in remembering the word's meaning.

Principle 4: Learners should have opportunities to elaborate word knowledge.

There are many aspects of word knowledge such as grammatical patterns, prefixes, suffixes, usage in receptive and productive skills. Thus, teachers should carefully select words that are worth deep processing and practicing and which aspects of word knowledge aspects will be most beneficial for their learners. Elaborating word knowledge means that learners should connect what they already know to new information of the word or expand their word knowledge. Teachers should provide various exercises that can deepen learners' word knowledge such as using words in a new context, word categorization, semantic map, tree diagram, matching derivations and inflections as well as synonyms and antonyms (Hunt & Beglar, 2002).

Principle 5: Learners should have opportunities to develop fluency with known vocabulary.

Fluency occurs from learners recognizing or using known words in familiar grammatical and organizational patterns without a doubt. Therefore, activities that build fluency recycle the known words. Watts (1995) concur that learners should encounter the same newly learned words many times in a diverse context for effective vocabulary instruction. Schmitt and Carter (2000) describe that vocabulary acquisition is gradually built; consequently, learners should be exposed to a newly taught word repetitively to consolidate it in their minds. Moreover, Hunt and Beglar (2002) propose that sight words, or words that learners can automatically recognize their appearance and can build fluency through extensive reading and studying high-frequency words. Furthermore, teachers should teach learners to practice looking at words in groups rather than a single word when reading. Fluency development is one

of the four strands of a well-balanced language course resulting from research on second language acquisition. The others include meaning-focused input, meaning-focused output, fluency development, and language-focused instruction. (Nation, 2002).

The last approach, independent strategy development, is in principles 6 and 7.

Principle 6: Learners should try guessing word meaning from context.

Guessing from context is useful for vocabulary learning although it may not help learners truly understand word meaning and form. This strategy may contribute to the understanding of word knowledge such as collocation, association, and grammatical patterns when learners pay close attention to context. Moreover, high-proficiency learners seem to use this strategy better than low-proficiency learners. If learners guess the meaning wrong or partially correct, they should analyze the correct meaning and why it is more appropriate to the context (Hunt and Beglar, 2002). In addition, Watts (1995) proposes that learners should learn new words in a meaningful context, and teachers should activate their background knowledge and experience when they teach new words. Recent research by Sabbah (2018) shows that learners in the guessing from context group scored higher than those in the dictionary-learning group. Besides, guessing from context improved the vocabulary learning of the high- and low-ability learners more than the intermediate level learners.

Principle 7: Teachers should introduce different types of dictionaries and teach how to use them. The skill to use dictionaries is likewise recommended by Nation (2011) and Watts (1995). Learners should be trained to study the entry of a word, including all the presented information that belongs to the word such as pronunciation, inflected forms, accompanying pictures, example sentences, and

etymology. Teachers should help learners see the usefulness of example sentences that illustrate the collocation, grammar, and pragmatics of the words. Lastly, teachers should guide learners to understand the word's original context clearly as it determines the sense of the word to be chosen from the dictionary (Hunt & Beglar, 2020).

As can be seen, the principles abovementioned included vocabulary learning strategies. Schmitt, Bird, Tseng, and Yang (1997) mention that language learning strategies empower learners to be independent learners. Nation (2001) suggests teaching learners vocabulary learning strategies to expand their vocabulary knowledge. More recent research by Mungornwong (2016) indicates that vocabulary learning strategies linked vocabulary size to reading comprehension stronger than vocabulary depth and reading strategies. Schmitt (1997, p. 207) comes up with a taxonomy of vocabulary learning strategies and categorizes them into two strategy groups: "strategies for the discovery of a new words' meaning" and "strategies for consolidating a word once it has been encountered." These two groups contain different types of strategies including determination, social, memory, cognitive, and metacognitive strategies. This taxonomy of vocabulary learning strategies has been widely employed and adapted for many research studies such as Attachoo and Chaturongakul (2015), Mungkornwong (2016), Pookcharoen (2016), Puagsang (2018), and Vo and Jaturapitakkul (2016).

In conclusion, Nation (2001) and Schmitt (2002) summarize that successful vocabulary teaching should employ a balanced mix of incidental learning activities and explicit instruction. However, Hunt and Beglar (2002) stress that explicit instruction tends to be the best to teach beginning and intermediate learners who have

minimal vocabulary. This view agrees with Nation's (2011) saying that beginner and intermediate learners should learn the first 2000-3000 words explicitly. After their vocabulary size and depth expand, they may gradually do extensive reading and independent strategies. Furthermore, teachers have to include various activities and exercises in all the approaches: incidental learning, explicit instruction, and independent strategy development, to teach vocabulary to learners. The learners' level and the educational goals of the program will design which activities should receive more emphasis.

The selected vocabulary learning strategies in this study are discussed in the next section.

2.2.3.3 Vocabulary Learning Strategies for Beginners Based on Empirical Research

Since vocabulary learning strategies should be taught to enable learners to learn words and become independent learners (Nation, 2001; Schmitt et al. 1997), this section discusses four vocabulary learning strategies based on the current experimental studies on vocabulary learning strategies that have been effectively employed by low proficiency university students in the English as a foreign language (EFL) context. For each strategy, the contents start with the background and proceed to existing empirical research.

A. Analyzing Affixes and Roots

This section describes the background of word parts consisting of affixes and roots, the importance of word part knowledge on learning academic vocabulary, suggestions on choosing and introducing affixes to learners, and empirical research regarding morphological analysis and beginners.

Word parts are parts that can make up a word. They are known as affixes and roots and are one of the constructs of vocabulary knowledge defined by Nation (2011). Affixes and roots are morphemes which are the minimal units of meaning that form many words in English. Affixes are bound morphemes that are not words by themselves but are attached either to the beginning (prefixes), the end (suffixes), the middle (infixes), or the beginning and end of a word (circumfixes). Roots are free morphemes. They are words that can stand alone by themselves and carry the core semantic content (Fromkin et al., 2017). In English, affixes are divided into derivational morphemes and inflectional morphemes. Derivational morphemes included prefixes and suffixes. When they are added to a word or root, they create a new word with a new meaning, which is called a derived word or derivative. Examples of prefixes are un-, dis-, and im-, and examples of suffixes are -ion, -ize, and -ful. Inflectional morphemes have grammatical functions that indicate third-person singular present (-s), past tense (-ed), progressive (-ing), past participle (-en), plural (s), possessive ('s), comparative (-er), and superlative (-est). Inflectional morphemes are productive because they apply flexibly to most words, but derivational morphemes vary greatly in their productivity (Fromkin et al., 2017). Milton (2009) suggests that the most regular and frequent inflections are likely to be learned earliest. Derivational morphemes are considered less frequent affixes and are learned quite late. Moreover, vocabulary size seems to link with affix learning. Learners may need a large vocabulary size before mastering complex word structures. Having decent amount of vocabulary size also corresponds with Sasao and Web (2017) who propose that learners derive the meaning of an unknown word from the known word.

Analyzing affixes and roots is one of Schmitt's (1997) vocabulary learning strategies (VLS) to discover word meanings and thus help learners acquire plenty of words to their English vocabulary repertoire. To acquire new words, derivational morphemes including prefixes and suffixes are of great importance as they create new meanings rather than grammar which is created by inflectional morphemes. More importantly, the knowledge of prefixes and suffixes can help learners learn lower-frequency words that may be omitted from direct instruction in class (Sasao & Webb, 2017). As Xue and Nation (1984) mention, academic words belong to the lower-frequency word level, and affixes are likely to help learners derive the meaning of academic words. Coxhead (2011) points out that many English academic words have affixes particularly prefixes. However, the teacher should not overwhelm learners with too many affixes but should regularly introduce them, preferably by frequency and revise them continuingly. However, derivational complexity can make vocabulary learning difficult (Laufer, 2001), and word part knowledge might not always help learners guess the unknown word meaning from context (Sasao & Web, 2017).

Harris, Schumaker, and Deshler (2011) propose an effective strategy of morphological instruction comprising four steps. First, break a word into its parts of root, prefix, and suffix. Second, consider the meaning of each part. Third, predict the word meaning based on its parts. Last, check the predicted meaning by using the dictionary for a definition. Previous studies have proved that morphemic analysis is helpful to develop vocabulary knowledge for low proficiency learners. For instance, Varatharajoo (2016) taught compounding, inflectional, and derivational morphemic awareness to ESL low proficiency upper secondary school students in Malaysia and found that the students gained inflectional morphemes the most and followed by

compounding and derivational morphemes. The researcher concluded that morphemic analysis should be taught to aid vocabulary development of low proficiency students. Another study by Craigo, Linnea, and Hart (2017) compared the effects of different ways of teaching unknown words to community college students who had a problem comprehending expository text and faced challenges while they read the text in class. Forty-one participants came from multicultural backgrounds including both bilinguals and monolinguals studying in the US, and they were divided into three intervention groups: the strategy group, the definition group, the strategy plus definition group, and one control group. The strategy group was taught to use combined vocabulary learning strategies: contextual, morphological, and syntactic analysis. The results revealed that all the three intervention groups learned words and comprehended passages better than the control group but different results from several assessment tasks did not favor any intervention group. In summary, the researchers advocate teaching both strategies and definitions to learners.

B. Analyzing Parts of Speech

Part of speech, or word class, tells the grammatical function of a word (Nation, 2011; Schmitt, 2000). It is under the "use" level of word knowledge defined by Nation (2011), which concerns grammatical functions, collocations, and constraints on use. Grammatical functions concern the patterns that the word occurs (receptive) and the patterns to use the word (productive). Milton (2009) simplifies them as knowing the part of speech of a word and how this part of speech links to other words. There are various types of parts of speech: noun, pronoun, verb, adjective, adverb, preposition, conjunction, and determiner (Thornbury, 2002). However, the four major types that language research has emphasized are nouns, verbs, adjectives, and adverbs

(Schmitt, 2000), which are regarded as content words to carry most information in a text (Thornbury, 2002) and are words to test vocabulary knowledge (Read, 2000). Thus, it can be implied that the noun, verb, adjective, and adverb gain priority in vocabulary learning. Peters (2020, p. 129) explains the properties of each word class that affects learning. First, verbs have various forms than nouns and adjectives as they change due to number (is-are), person (walk-walks), or tense (sing-sang-sung). Second, the lexical properties of nouns are "more specific, concrete, imageable, meaningful, and unambiguous." On the other hand, verbs are relational and convey exceptions, which make them "abstract, polysemous, less imageable, less meaningful, and less concrete." Learners should use contextual clues or syntagmatic relationships to understand the meaning of a verb. Nissen and Henriksen (2006) add that learners should know the collocations of a verb to understand it properly. Adjectives are inherently relational the same as verbs because their meanings are specific to the nouns they modify, so studying them in isolation seems to be more difficult. As for adverbs, Webb (2020) describes that adverbs that end in -ly tend to include adjective bases and are content adverbs whereas other adverbs tend to be function words.

Knowing the part of speech of a word has many benefits. First, Schmitt (2000) explains that it is involved in learning and storing vocabulary. Words from the same part of speech are closely linked while those from different word classes are rather loosely linked. Second, part of speech knowledge is related to a meaning-based relationship of lexical organization patterns. When learners know word class and sense relations, word associations tend to move from being syntagmatic to paradigmatic. Syntagmatic associations usually concern different word classes occurring in proximity or a sequential relationship such as abandon-ship, and are the

focus of young language learners. Paradigmatic associations concern the same word class occurring in a semantic or meaning-based relationship such as abandon-leave. Third, Schmitt (1997) reports that more advanced learners seem to appreciate knowing the part of speech and consider it as a helpful vocabulary strategy. Fourth, knowing the part of speech can help infer the meaning of unknown words in an English text (Clarke & Nation, 1980; Qian, 2004). Fifth, it helps learners use words in a grammatically correct manner. However, it is possible that learners can use a word correctly but do not know the word class or they know the word class but cannot use the word correctly. The teacher should teach the word class when teaching a vocabulary item (Schmitt, 2000).

Part of speech can be used to teach collocations through the syntactic structure of language to avoid sheer memorization of collocations (Palmer, 1933, as cited in Barnbook, Mason, & Krishnamurthy, 2013). A collocation is a group of words that are likely to appear together than random. It is an umbrella term that includes lexical collocations, grammatical collocations, phrasal verbs, and idioms (Lewis, 2000). Knowledge of collocation helps improve vocabulary knowledge because learners can learn new meanings from chunks of words and use authentic language (Park, 2014) since collocations, as well as other types of multi-word expressions, cover from 20% to more than 50% of spoken and written discourse of native speakers (Siyanova-Chanturia, 2015). Although collocations have no restrictions on the part of speech and the positions of the collocates to the node (Barnbook et al., 2013), common types of collocations that learners at any stage should know include adjective+noun, verb+noun, and noun+noun types (Lewis, 2000; Siyanova-Chanturia, 2014). Other types that are also suggested are adverb+verb, verb+adverb, and adverb+adjective

(Hill, 2000). It can be implied that collocations encompass the knowledge of parts of speech or word classes.

There have been empirical studies proving that beginners can learn and benefit from collocations despite the common belief that collocations better suit intermediate and advanced learners. Kang (2019), for instance, investigated the effectiveness of using a web-concordance on collocation learning. The participants were 24 lower-level EFL Korean first-year university students whose TOEIC scores were lower than 400. They underwent the same deductive collocation in class but were divided into two groups when doing assignments. One group used Corpus of Contemporary American English (COCA) and the other group used their resources such as online collocation dictionaries. Both groups' writing demonstrated more use of lexical than grammatical collocations, but the COCA group produced more collocations and increased them in subsequent writings. In addition, Siyanova-Chanturi (2015) analyzed the composition of 36 Chinese beginners learning Italian to see the development of L2 noun and adjective collocations. The students' writings were collected at three intervals of a five-month course at the beginning, middle, and end. The analysis illustrated that the writings at the end of the course contained high frequency and strongly associated collocations. Likewise, Webb and Kagimoto (2009) found that collocations could be effectively taught to high- and lower-level Japanese university students in a short time and recommended teachers in EFL context to explicitly teach collocations because incidental gains were rather small. Moreover, teachers can use the productive tasks such as cloze tasks and sentence production tasks to increase greater productive knowledge of collocations and prepare more time for learners to complete these demanding tasks.

C. Guessing Meaning from Context

This section discusses the background of the guessing meaning from context strategy, knowledge contributing to understanding the context, types of context clues for inferring word meaning, and empirical research regarding the guessing meaning from context strategy for beginners.

Second language learners seem to have a great need to use context to learn a language because they encounter unfamiliar words and meanings much more than first language learners do due to the force to learn a second language faster than the natural rate of first language acquisition (Nagy, 2001).(Nagy, 2001) Furthermore, written texts are usually the main source of meeting new words in second language learning. Guessing word meaning from context is considered a sub-type of the wider general inferencing process that learners use throughout text comprehension (Wesche, Paribakht, & Haastrup, 2010). They make connections of information to interpret what they read or hear (Brown & Yule, 1983). Other terms that could be used interchangeably are lexical guessing and lexical inferencing, which involve guessing the meaning of unknown words by applying available linguistic and other sources of knowledge to the context (Qian, 2004). Lexical inferencing is considered an important reading strategy since learners must read the context to infer the meanings of unfamiliar words (Nagy, 2001; Qian, 2004). Wesche et al. (2010) suggest that lexical inferencing works at the center of the relationship between vocabulary development and reading comprehension and supports incidental word learning while reading. Moreover, Schmitt (1997) names the strategy as the guessing from textual context strategy and includes it in the taxonomy of vocabulary learning strategies (VLS).

Nagy (2001) identifies three types of knowledge that support contextual inferencing: linguistic knowledge, world knowledge, and strategic knowledge. Important points regarding these types of knowledge are explained as follows:

- Linguistic knowledge: it includes three elements: syntactic knowledge, word schemas, and vocabulary knowledge:

  Syntactic knowledge: the word meaning and its syntactic behavior determine each other. Still, second language learners may not know syntactic construction so they cannot utilize the information. Also, the first language syntactic knowledge may influence how they interpret the meaning of unknown words in sentences.

  Word schemes: it is the sense to know possible or reasonable word meanings. Simply put, it constraints possible word meaning; for example, "to watch television" not "to tube television."

  Vocabulary knowledge: it is knowledge of the words around a particular word. This could be an obstacle when inferring word meaning. Therefore, second language learners must reach quite a high level of L2 proficiency to use the context.

- World knowledge: it refers to learners' knowledge of the world or prior knowledge such as a speech situation. Learning new word meanings from context for a familiar concept is easier than for a new concept.

- Strategic knowledge: it is knowledge about word-learning strategies and reading to understand the text. It tends to yield major learning gains in a short instruction time compared to linguistic or world knowledge that might take months or years.

Nation (2011) describes five realistic and favorable conditions for guessing to

occur

and yield reliable results. First, learners must know at least 95% of the running words; that is, there is one unknown word in 20 words (Liu & Nation, 1985). Optimally, they should know 98% coverage for successful guessing, which means one unknown word in 50 words (Nation, 2011). Second, the result of guessing must be based on the actual words unknown to each learner; in other words, selecting the choice of words must be done with learners' actual knowledge taken into consideration. Third, each learner's skill in guessing varies, and some learners may be better than others. Fourth, learners must get credit even when their guesses are partially correct, not 100%, because their answers positively contribute to the word meaning given that guessing from context is a cumulative process that learners gradually develop. Fifth, the result discussion must concern the difference between guessing from natural contexts and specially made or chosen contexts.

Regarding clues in lexical inferencing, different scholars have classified context clues in different ways. Two examples relevant to the present study are illustrated. Qian (2004) explains that clues can be at a few different levels. The lower level includes orthographical, morphological, and phrasal clues. The middle level consists of sentential and inter-sentential clues. The global level is a whole paragraph or a whole text as well as world knowledge. Qian (2004) lists six types of clues in a survey to investigate lexical inferencing practices in reading an English text among 61 young adult ESL learners in Canada. The clues include a morphological clue, a syntagmatic clue, world knowledge, sentence grammar, word class, and global meaning. In

addition, Sasao (2013) and Sasao and Webb (2018) identify 12 types of discourse clues in their Guessing from Context Test (GCT). They are "direct description, indirect description, contrast/comparison, synonym, appositive, modification, restatement, cause/effect, words in series, reference, association, and example" (p. 118). The researchers point out that different researchers may use other labels to refer to the same ideas and they may have different taxonomies of discourse clues. Although these 12 discourse clues are derived from 9 research studies, they are not mutually exclusive.

To teach learners to guess the meaning from context, Walter (2004) explains that the strategy proposed by Clarke and Nation (1980) seems to be the most well-known. It starts with determining the part of speech of the word and then the immediate context in the same clause or sentence. After that, the relationship with the wider context of adjacent clauses or sentences is determined before making a guess. Lastly, learners check their guesses by looking at its part of speech, word parts, a possible substitute word, and the definition in a dictionary. For second language learners to successfully infer word meaning from context, they must know most of the words in any text to achieve it (Nagy, 2001). Likewise, Nation (2001) cautions that the density of unfamiliar words in a text largely affects accuracy in guessing because a high number of unfamiliar words causes a more challenging task. Furthermore, guessing from context through reading requires prerequisites including reading skills and existing vocabulary (Gu, 2003; Shahar-Yames and Prior, 2018). According to Huckin and Coady (1999), guessing from context requires basic vocabulary, word recognition, metacognition, and background of subject matter. As a result, L2 beginners may have great difficulty guessing unknown words from a text because

they do not have adequate target language skills and are thus regarded as less effective guessers or incidental learners (Acosta, 2019; Gu, 2003; Shahar-Yames and Prior; 2018).

Despite the potential limitation of beginners to effectively utilize guessing from context, there have been experimental studies showing that low proficiency learners could benefit from guessing word meaning from context, or lexical inferencing. These studies employed texts at the learner level and thus made guessing from context possible.

To begin with, Sabbah (2018) compared the effects of guessing word meaning from context strategy (incidental/implicit approach) and using a monolingual dictionary (direct/explicit approach) on 60 female Saudi Arabian university students in a four-week intensive course. The students were divided into two groups: a guessing from context group and a dictionary group. Each group had students with high, medium, and low proficiency according to their scores from the IELTS Placement Test. The guessing from context group was asked to guess the meaning of the words that repeatedly occurred in the coursebook: *Increase Your Vocabulary* and read six novels from the Penguin graded readers. The dictionary group studied with the same coursebook and looked up unknown words from the *Oxford Advanced Learner's Dictionary*. The results from the pretest and posttest from the 3000 Productive Word Level Test showed that the guessing from context group outperformed the dictionary group. For both groups, all proficiency levels benefitted from their employed strategies. However, the low- and high-proficiency students in the guessing from context group improved their vocabulary more than the intermediate-proficiency students. The results from this study confirmed that

incidental learning is suitable for all proficiencies. The reasons why the dictionary group gained lower scores could be that a monolingual dictionary was their new experience, the students did not have repeated exposures to words from graded readers, and looking up words in a dictionary might not be as enjoyable as reading novels.

Another study showed the supportive role of suitable text level for successful lexical inferencing and general inferencing skills that low proficiency students used to help them, although the focused language was not English, and the participants were higher elementary school students. Shahar-Yames and Prior (2018) investigated whether fifth-grade Russian-speaking minority students (LM) did lexical inferencing poorer than native Hebrew speaking peers (NH), and the underlying skills the two groups utilized to aid successful lexical inferencing. The LM group generally had considerably lower vocabulary knowledge than the NH group despite having been immersed in Hebrew societal language for many years. This study employed a quantitative approach, and regression analyses were the means to interpret the data. There were different measures to assess the participants' skills that supported lexical inferencing. First, lexical inferencing was for the participants to read eight short narrative texts and write the definitions of a target word in each text. Second, a picture name test was to measure Hebrew productive vocabulary. Third, a single-word reading-aloud test was to measure word reading accuracy. Fourth, a test of Non-verbal Intelligence-3 containing abstract and figural problem-solving items was to measure non-verbal inferencing ability. Fifth, a reading comprehension test containing eight texts of different lengths and difficulty levels.

The results revealed that the Russian-speaking minority students (LM) could perform lexical inferencing almost equal to native Hebrew-speaking peers (NH). Regression analyses revealed the skills that predicted lexical inferencing in both groups were reading accuracy (decoding) and reading comprehension. Reading comprehension was the most contributive among the other underlying skills. Only vocabulary and non-verbal inferencing ability contributed to the performance of the LM group but not the NH group. The researchers suggested that the LM group used the non-verbal inferencing ability (general inferencing ability) to compensate for the vocabulary performance, which was lower and more deviated than the NH group. However, given that the LM group could do the lexical inferencing tasks almost as well as the NH group, the vocabulary in the texts must be under the LM group's vocabulary threshold level for text comprehension. Moreover, the eight texts for lexical inferencing tasks in this study did not include low-frequency words to decrease reading comprehension difficulties. In conclusion, the researchers recommended that the texts to promote incidental vocabulary learning must be designed to match learners' vocabulary level such as relatively easy texts for language minority students in their study. Also, teachers could model using lexical inferencing to help learners implement the strategy successfully.

A study carried out by Teo's (2012a) employed short passages from TOEFL as reading texts for Taiwanese university students whose proficiencies were low intermediate to high intermediate levels. The researcher employed individualized DA to improve the students' reading skills which comprised finding the main ideas, guessing word meaning from contextual clues, and making inferences. Five students participated in the study. The pretest and posttest were used to measure their

improvement after the 4-week DA intervention. Each test consisted of 12 short passages taken from TOEFL exams for 12 questions. Four of which assessed the skill in guessing word meaning from contextual clues. The results showed that the score increase in the guessing word meaning from contextual clues was apparent among all the participants. Moreover, the participants needed explicit mediation less in the later sessions, because they became confident in relying on implicit mediation and on themselves.

Although it was generally known that low vocabulary knowledge and reading skills may hinder students from guessing unknown words correctly, another reason may be their improper use of the strategy. Anvari and Farvadin (2016) compared lexical inferencing strategies between successful and less successful EFL strategy users. The participants were 15 intermediate EFL teenagers aged between 13 and 19 years old. The researchers had them read a short story and an expository text and think aloud to show their employed strategies. In this study, the difficult words in the texts, except the target words, were replaced with more frequent synonyms to facilitate comprehension. They found that the successful strategy user spent more time reading and infer unknown words and considered both surface and implied meanings of the sentence. They asked themselves questions to check their inferred meaning and re-analyzed to confirm or disconfirm their strategies, and they combined different strategies such as analyzing prefixes, suffixes, and parts of speech. In contrast, the less successful ones did not consider contextual clues and considered only the surface meaning. They could not maintain their attempt at guessing words. Although they tried to use different strategies to help, they were mostly still unable to guess the meaning of the target words. The researchers suggested teachers train less successful

strategy users to pay special attention to textual clues and implied meaning and to use other strategies to help infer unknown words correctly.

D. Using a New Word to Form a Sentence

Using a new word to form a sentence is one of Schmitt's (1997) vocabulary learning strategies to consolidate the word that has been encountered. Schmitt (2000) said that writing an appropriate sentence is productive knowledge although it comes from recognizing the word at first. Learners must use the knowledge of the word's meaning, word class and may use its collocation and register marking. Practically, Datchuk (2017) describes a simple way to write a basic sentence to include two main parts: the part that names someone or something and the part that gives more information. Research involving using a sentence writing task to learn vocabulary stems from a prolific line of research investigating the concept of task-induced involvement saying that the task demand determines how much vocabulary is learned (Gu, 2003).

The concept is from Laufer and Hulstijn's (2001) Involvement Load Hypothesis to judge the deep processing of words induced by the task design. Tasks which make learners highly involved in word learning are more effective for immediate learning and retention of word knowledge than tasks that induce lower learner involvement. Involvement refers to a motivational cognitive construct of three dimensions: need, search, and evaluation, although some may be absent if not required to complete the task. Need is a motivational dimension whereas search and evaluation are cognitive dimensions. Need is generated by intrinsic and extrinsic motivation resulting in two levels of need: strong need (intrinsic) and moderate need (extrinsic). Search involves finding the meaning or form of the unknown words and

includes activities such as consulting a dictionary, making inference, and negotiation. Evaluation requires learners to compare the word's meaning or usage with other meanings or words to test if the word fits a certain context or not and involves learners to create an appropriate context for the word. There are two levels of evaluation: moderate and strong. An exercise of choosing the correct word for the context is a moderate evaluation, while writing a sentence using the target word in an appropriate context has strong evaluation because it demands deep processing and high mental effort.

According to Zou (2017), a sentence writing task requires strong evaluation because of chunking and pre-task planning. Gobet et al. (2001) explain that chunking is the way to associate information elements that are related to each other; for instance, letters are combined into words and words into sentences, and is believed to facilitate information memorization. The pre-task planning is needed before writing a sentence or a composition. Hulstijn (2001) contends that learners must create scenarios in their heads, which resembles a rehearsal, before the actual writing. Thus, the practice occurs twice: in their mental space and on the paper, which is believed to support word learning.

Research studies have demonstrated that a sentence writing task benefited low proficiency students. Park (2018) compared the effects of the sentence writing task versus the gap-filling task on English vocabulary learning with 11th grade Korean high- and low-proficiency school students. The sentence-writing group was assigned to write one or two autobiographical sentences to describe their experiences and write imaginary sentences about an imaginary person. The results showed that both proficiency levels benefited from the sentence writing task than the gap-filling task

but there was no significant difference between the two kinds of writing tasks.

Another research study by Stubbe and Nakashima (2017) investigated the sentence writing incorporating the target words and the translation of the same words by comparing the scores of both tasks from 209 high-beginner first-year Japanese university students. The results revealed that 19% of the pairings did not match because there were correct sentences with wrong translations and wrong sentences with correct translations. The researcher concluded that written sentences did not regularly portray the students' actual word meaning knowledge. A sentence writing task also benefits intermediate students. In another study, Zou (2017) compared three approaches to evaluation including cloze exercises, sentence-writing, and composition writing among intermediate Chinese university students. It was found that the two writing tasks with more involvement load better promoted word learning than cloze exercises. Thus, a sentence-writing task incorporating the target word may be considered a potential, productive vocabulary-learning strategy. According to Gu (2020), this task would help fulfill the need for more research on how learners cope with learning productive vocabulary.

In the present study, all the four strategies, namely analyzing affixes and roots, analyzing parts of speech, guessing meaning from context, and using a new word to form a sentence were selected for low proficiency students to use in the DA tasks.

2.2.3.4 Strategy Instruction Framework (CALLA)

Since the present study intended to help low proficiency students use vocabulary learning strategies (VLS) through dynamic assessment (DA) tasks to enhance academic vocabulary knowledge, a strategy instruction framework used in the study is discussed below.

Cognitive Academic Language Learning Approach (CALLA) was first developed by Chamot, O'Malley, and their colleagues to increase academic achievement of English language learners (ELL) in the U.S., who studied through their second language. CALLA has been successfully used among ELL learners in the U.S. and language minority learners in other countries to develop academic competence in a short time (Chamot, 2007). It has three interrelated components: high-priority academic content, academic language development based on the content, and explicit strategy-learning instruction. In ESL and EFL contexts, CALLA has been adapted to directly teach language-learning strategies and has become a widely accepted model for language learners (Gu, 2018).

CALLA consists of a five-stage instructional sequence: preparation, presentation, practice, self-evaluation, and expansion. The preparation is for identifying learners' present use of learning strategies and what additional strategies may be needed. The presentation stage is for the teacher/researcher to present and model the new strategy. The practice stage enables students to practice with classmates collaboratively. The self-evaluation stage is for learners to evaluate their success in learning strategies and develop metacognitive awareness of their learning processes. The expansion stage encourages learners to apply the learning strategies to new contexts (Chamot, 2007, 2021). These five stages appear in cycles and the cycle repeats when new content, language, and strategies are presented. However, the stages are not executed in a fixed sequence but are normally recursive because the teacher might continue to activate learners' background knowledge and present new information at appropriate points when learners are responsive. Moreover, learners

should have ample opportunities to practice, self-regulate, and apply the strategies to new contexts (Chamot & O' Malley, 1996).

Gu (2018) summarizes three special remarks about the five-stage instructional sequence that, first, learners' responsibility gradually increases since the teacher's scaffolding slowly drops. Second, the instructional sequence is flexible rather than a fixed manner. Third, the three components of CALLA are integrated in the instruction; that is, strategies are taught to enable learners to learn the language which is likewise taught in the content. Figure 2.2 illustrates CALLA as a strategy instruction framework.
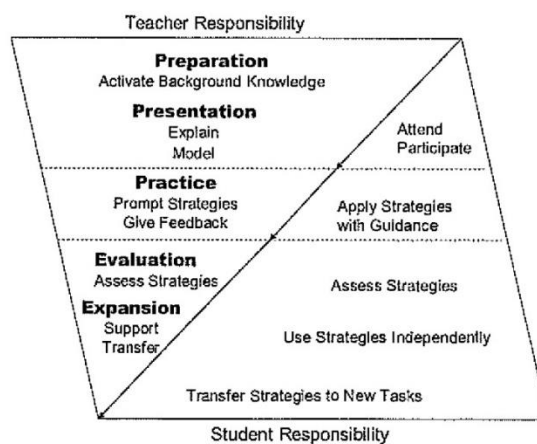
Figure 2 Strategy Instruction (CALLA) Framework (Chamot et al., 1999, p. 46, as cited in Gu; 2018, p. 28)

Given that CALLA has been proven effective in teaching learning strategies in second language instruction such as Gu (2007) and Nguyen and Gu (2013) plus its usage flexibility, it seems compatible with vocabulary learning strategy (VLS) instruction combined with dynamic assessment (DA) tasks implemented in this study.

The next section discusses vocabulary assessment and test.

2.2.4 Vocabulary Assessment and Test

Various reasons for assessing vocabulary knowledge from different

stakeholders and different trends in language testing have resulted in many kinds of vocabulary assessment (Read, 2000). For example, classroom teachers want to assess the progress and diagnose the strengths and weaknesses of learners' vocabulary learning. Researchers in second language acquisition want to know how learners develop vocabulary knowledge and how they use it. Researchers in language testing want to study the design of the vocabulary test whether it is for assessing achievement or proficiency. Moreover, the discrete approach views words as independent units and tests only words while the communicative approach treats vocabulary knowledge as part of the performance tests simulating communication activities. Realizing that vocabulary assessment varies greatly, Read (2000) proposes three dimensions in continua as a scope of vocabulary assessment: discrete/ embedded, selective/comprehensive, context-independent/context-dependent.

- The discrete/embedded continuum focuses on the construct to determine the extent to which the tested vocabulary knowledge is an independent construct or is embedded in a larger construct. Academic writing ability and reading comprehension ability are considered larger constructs. However, the judgment of the construct lies in the test purpose and how the results are interpreted, not the format. A test can have many words and be discrete since its purpose is to measure the understanding of the meanings of the selected words or phrases in a text.

- The selective/comprehensive continuum focuses on the range of vocabulary to be tested. The selective end is the selection of specific vocabulary items by the test writer while the comprehensive end includes all the vocabulary content of the input material for reading or listening

tasks or the test-taker's response in speaking or writing tasks in which the overall vocabulary use is assessed.

- The context-dependent/context-independent continuum focuses on the role of context and whether test-takers can answer with or without the use of contextual information, or to what extent they engage with the context. Context can be a sentence, a discourse, and a whole text. The vocabulary measured in speaking and writing tasks is considered context-dependent because learners must use vocabulary appropriate to the task.

Nation (2007) suggests that vocabulary assessment of the same word can employmultiple measures because each will yield different kinds of vocabulary knowledge, including using tests with and without contextual sentences, or using a multiple-choice test and a word translation test. In addition, different tests could be seen as complementary rather than competing measures, and multiple measures provide a more comprehensive and useful view of vocabulary knowledge. In practice, it is not surprising that numerous vocabulary techniques are employed. A research study by Riahi (2018) explored how 200 Tunisian EFL secondary school teachers use vocabulary teaching and testing techniques. The results showed several assessment techniques ranging from the most to the least frequently used including reading comprehension tasks, writing tasks, fill-in-the-blanks, and multiple-choice, respectively.

A vocabulary test can be considered a subset of an assessment following Bachman's (1990) definitions of assessment and test. The method of testing is a kind of measurement that quantifies the characteristics of a person or thing following the rules and statistical data analysis and informs assessment, which is the process of

gathering data due to systematic and substantively grounded procedures, synthesis, interpretation, and communication to assist the instructional decision (Bachman, 1990). Regarding the L2 vocabulary tests, Laufer and Goldstein (2004) propose that two elements are needed in testing receptive versus productive vocabulary knowledge of the form-meaning link. One is the word knowledge aspect (form or meaning) and the other is the degree of mastery (recognition or recall). As such, Schmitt (2010, p. 86) has renamed them recognition and recall tests as shown in Table 8.

Table 8 *Vocabulary test types of the form-meaning link (Schmitt, 2010, p. 86)*

Word knowledge	Word-knowledge tested	
Given	*Recall*	*Recognition*
Meaning	**Form-recall**	**Form-recognition**
	(supply the L2 item)	(select the L2 item)
Form	**Meaning-recall**	**Meaning-recognition**
	(supply definition/L1	(select definition/L1
	translation, etc.)	translation, etc.)

       The recall tests are to test learners' productive knowledge. The form-recall tests provide the L1 meaning and ask learners to write the L2 word form. The meaning-recall tests provide the L2 word form and require learners to write the L1 meaning. The recognition tests are to test learners' receptive knowledge. The form-recognition tests provide the meaning of the word and ask learners to select the L2 form. The meaning recognition tests provide L2 form and ask learners to select the meaning. Examples of vocabulary tests are provided below (p. 276).

"1. Form recall: d _____   hund

2. Meaning recall: dog   h_____

3. Form recognition: hund   a. cat   b. dog   c. mouse   d. bird

4. Meaning recognition: dog   a. katze b. hund   c. maus   d. vogel

(L1 = German [hund]; L2 = English [dog])"

A research study by McLean, Stewart, Batty (2020) revealed that different modalities of vocabulary knowledge yield different predictions of reading proficiency. They found that meaning-recall was the strongest predictor and followed by form-recall tests and concluded that vocabulary recall tests better predict reading proficiency than vocabulary recognition tests.

2.3 Research Conceptual Framework

The research conceptual framework of this study is illustrated in Figure 2.3 below.
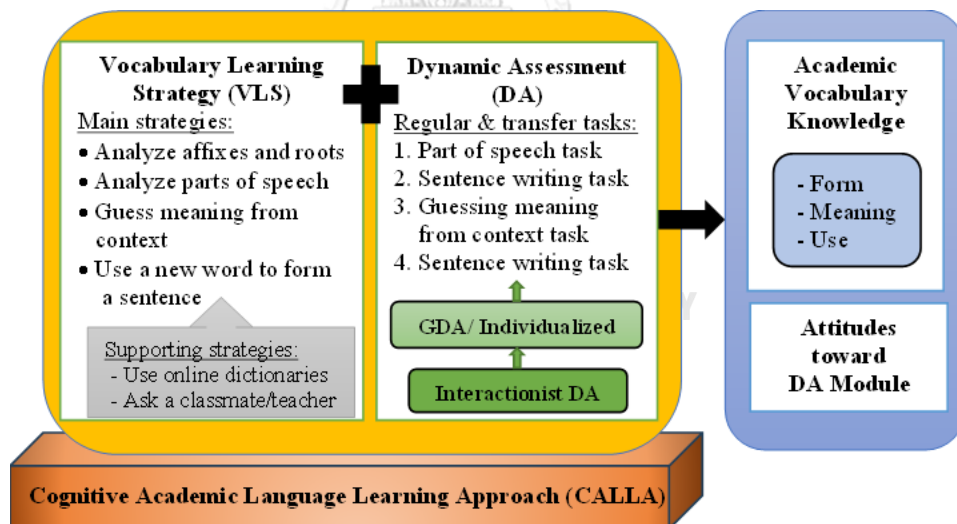
Figure 3 Research Conceptual Framework

The research conceptual framework shown in Figure 2.2 displays the dynamic assessment (DA) model as the independent variable while the students' academic vocabulary knowledge and attitudes toward the DA model were the dependent variables. The DA model combined three elements: dynamic assessment (DA),

vocabulary learning strategies (VLS), and the cognitive academic language learning approach (CALLA) as the instructional framework. The selection of VLS and the design of each DA task were based on students' English proficiency and previous empirical studies employing VLS for beginners including Craigo, Linnea and Hart (2017), Kang (2019), Park (2018), Sabbah (2018), Shahar-Yames and Prior (2018), Siyanova-Chanturia (2015), Stubbe and Nakashima (2017), and Varatharajoo (2016). The main VLS were analyzing affixes and roots, analyzing parts of speech, guessing meaning from context, and using a new word to form a sentence. The supporting VLS anticipated to be used during the DA intervention were using an online bilingual dictionary and asking a classmate and a teacher.

The DA tasks included a morphology task, part of speech task, guessing meaning from context task, and sentence-writing task. Each DA task included both the regular and transfer tasks. The regular task was for the students to internalize the learning. In general, the transfer task is a more complex task to track the degree of their development when learners apply what they have learned in the regular task (Poehner, 2007). In this study, both tasks were equipped with DA mediation and were included in CALLA instructional framework.

The cognitive academic language learning approach (CALLA) by Chamot (2007) was the teaching steps to convey the DA tasks because it has been adapted in ESL and EFL contexts to explicitly teach language learning strategies (Gu, 2018). CALLA consists of five stages: preparation, presentation, practice, self-evaluation, and expansion. They form a flexible instructional sequence in which a stage can reoccur to match learners' needs. In this study, the DA tasks occurred in two stages. The regular task occurred in the practice and the transfer task occurred in the

expansion stage. The preparation stage was for investigating the students' familiarity with the vocabulary learning strategy (VLS), while the presentation stage was for teaching necessary linguistic knowledge for the tasks and modeling how to use the VLS. The self-evaluation stage was for the students to reflect on their learning through the DA model.

Academic vocabulary knowledge generally refers to several constructs under the form, meaning, and use areas of vocabulary knowledge defined by Nation (2011). The selected constructs in the present study included word parts, form and meaning, concept and referents, grammatical functions, and collocations. Most of them targeted receptive word learning, while some targeted productive word learning. The students' attitudes were considered affective results revealing the students' feelings when studying with the DA model.

The intervention was intensive group tutorials. It focused on group dynamic assessment (GDA) to fulfil the scarcity of the GDA literature (Poehner, 2014). However, individualized DA was added to determine the gain from GDA at an individual level that GDA may not reveal. As Milton (2009) suggests, research should seek to identify how individuals varied in their vocabulary learning although the group behavior is quite predictable, so measuring vocabulary learning on individuals can explain it. In this study, individualized DA occurred after the GDA by adding more practice items without repeating the CALLA stages.

The approach to do both GDA and individualized DA in this study was the interactionist approach because it allowed the mediator to adjust the prompts flexibly to the learner emergent needs, so it was more sensitive to the learner's ZPD (Lantolf & Poehner, 2004). Simply put, the researcher could attune the mediation to the

students' answers easily which was suitable for tracking the students' cognitive processes and assessing their ZPDs. Moreover, concurrent GDA was selected because it allowed the participants to do all task items together without waiting for their turns. Given that the intervention was intensive and quite challenging for them, if the mediator used cumulative GDA by going through the whole series of prompts with a student one by one, each student may have a chance to do one or two items and become inactive while observing the others.

CHAPTER III
METHODOLOGY

In this chapter, the research design, context of the study, participants, instrument development and validation, data collection, and data analysis are described.

3.1 Research Design

The present research employed a mixed-method design to incorporate both quantitative and qualitative methodologies to answer the research questions. As for the intervention implemented in this study, the test-train-test design similar to the pretest-posttest experimental design to enhance the students' ability after the implementation of the intervention was used (Dörfler et al., 2009). The training provided rich qualitative data as evidence of assessment and learning and served as a case study. The group dynamic assessment (GDA) was the main training, and individualized DA was supplemental to determine how each participant learned and how much they gained from GDA.

3.2 Context of the Study

The setting of the participants was a small campus of a well-known public autonomous university in Thailand. The campus is situated in a province in the northern region of Thailand. The province was small, reserved, quiet, and peaceful with rice fields, ancient temples, waterfalls, and a hot spring, but it also suffered from drought, heavy smoke of forest fires from slash-and-burn agriculture, and high heat trapped inside the plateau surrounded by high mountains every year. The university campus itself was surrounded by woods and empty land located in a district about 20 kilometers away from the city. The nearest fresh market was four kilometers away. The students could commute between the campus and the city by the university bus

running at a fixed timetable of five to six rounds a day. There were five faculties and one college: Faculty of Law, Faculty of Social Administrations, Faculty of Public Health, Faculty of Science, Faculty of Fine and Applied Arts, and College of Interdisciplinary Studies. The students on this campus were from provinces all around Thailand, with the majority of them being from the northern provinces. They were non-English major students, and their English proficiency was mostly in beginner and intermediate levels. There were two English foundation courses offered, and the levels of these two courses were pre-intermediate and intermediate, respectively, which meant that students who took each course should reach the specified levels to successfully complete the course requirements. In their first year, most students took the first English foundation course in the first semester. It is worth noting that their English scores in the O-NET (Ordinary National Educational Test) were lower than half of the total score, that is, lower than 50 out of 100, which a clear indication of their low levels of English proficiency.

Each foundation course combined integrated skills: listening, reading, speaking, and writing while vocabulary and grammar were also included in every unit. The vocabulary taught was from the pre-determined words in the coursebook reading passages and vocabulary exercises book. The course contents covered several topics such as social sciences, environmental science, business studies, and technology to suit their interest as they were from different faculties. The class period was three hours for a total of 15 periods in each course. Each class consisted of 45 students from two to three faculties studying together. When midterm and final exams were administered, their test mean scores were about half of the total scores, and a considerable number of students marginally passed the courses with D or D+ grades.

However, there were struggling students who failed this course every year which meant they had to make one more attempt in the summer semester. What worsened the situation was that there had been an inadequate number of English lecturers to teach the whole campus for many years. The overwhelming teaching and assignment grading load undoubtedly made the lecturers unable to reach and accommodate the needs of all students, especially those who truly needed assistance.

3.3 Participants

The participants were five second-year undergraduate students who retook the first English foundation course in the summer semester of the academic year 2021 and were above 18 years old. Retaking the course they failed to repeat the basics implied that they had low English proficiency and required extra assistance from their instructor. However, the participants of this study took vocabulary tests as the screening instruments, and only students who got low scores were purposively recruited.

The first vocabulary test was the adapted academic vocabulary test based on the Academic Vocabulary Test (AVT) by Pecorari et al. (2019). The standard deviation (S.D.) was used as the selection criterion; that is, those who got -3 S.D. were invited first, followed by those who got -2 and -1 S.D., respectively.

The second vocabulary test was the first two levels of the New Vocabulary Level Test (NVLT) of Webb, Sasao, and Balance (2017), which measures the mastery of general vocabulary levels. The mastery of each level is indicated by 86% of the total score (Webb, 2021). In this study, the students took only the first and second levels because they tested the first 1000 and second 1000 word family levels which were the highest frequency and second highest frequency levels that provided the

majority of text coverage (Nation, 2006) and the foundation for further lexical development. The participants should reach mastery of the first word family level as they would have basic vocabulary to do the tasks. However, they did not master the second word family level because Milton (2009) said that knowing less than 2,000 word families characterized beginners.

The reasons to include both tests were that the adapted academic vocabulary test scores allowed the researcher to invite students who knew less to join the intervention to increase their academic vocabulary knowledge and that the general vocabulary test scores provided the baseline data to discuss the participants' performance because they would use general vocabulary to perform the tasks to learn academic vocabulary.

As a result, there were three inclusion criteria. First, the students retook the first English foundation course in the summer semester. Second, they received low academic vocabulary scores compared to the group. Third, they knew fewer than 2,000 word families of general vocabulary. To get the students to do the screening instruments, the researcher asked permission from the instructor of the first English foundation course at the end of the summer semester to allow the researcher to introduce herself, explain the research objectives and data collection procedures, and invite the students to do the two vocabulary tests outside their class time. The students received an information sheet in an attempt to protect their rights, and the researcher made an appointment with them. On the test date, they were asked to sign an informed consent form before doing the test, and the researcher asked for their contact information including their telephone number and e-mail address to subsequently invite some students whose vocabulary scores met the selection criteria to be the

participants of the study. The exclusion of the participants applied if they fell into one of the three criteria. First, they missed doing one regular task of the group dynamic assessment (DA) tasks. Second, they missed doing two transfer tasks of the group DA tasks. Third, they missed doing two individualized DA tasks. The details of the tasks were described in the research instrument section.

3.3.1 Participant's Scores from Screening Instruments

When administering the screening instruments, there were 13 students who took both tests. The mean score of the adapted academic vocabulary test was 12.38 out of 30 and the S.D. was 3.34. The maximum score was 18, and the minimum score was 6. The criteria for selecting the participants were their scores based on standard deviation (S.D.), which indicated their relative standing to the student group. The scores at minus S.D. indicate the lowest (-3 S.D.), the second lowest (-2 S.D.), and the third lowest (-1 S.D.). In this study, the student who received the minimum score of 6 points or -2 S.D. was invited first, followed by those who received the next higher scores respectively. In addition, the results of the first and the second levels of the New Vocabulary Level Test (NVLT) measuring the general vocabulary level varied. Most students reached the mastery of Level 1 but not of Level 2. Some students did not reach the mastery of Level 1. The mastery of each level was determined by gaining 86% of the total score of 30 (Webb, 2021).

There were five students voluntarily agreed to participate in this study. Their scores from the screening instruments and their pseudonyms are displayed in Table 3.1. However, there were two exceptions to the participants' scores that did not match the selection criteria. First, the adapted academic vocabulary scores needed to be between -3 and -1 S.D., but three participants received scores around the mean

including Jee (11 points), Smile (13 points), and Ging (14 points). Since the mean

score (12.38) was low compared to the total score of 30 points, it was then assumed

that these scores could be accepted. Second, there were two participants whose NVLT

scores of Level 1 did not reach the mastery level. They were Koko (40%) and Pukpik

(60%). However, it was believed that including them would give more perspectives

on the contributions and challenges they would bring to dynamic assessment.

Table 9 *The participants' scores from the screening instruments*

Test	Test Criteria	Participant				
		Koko	Pukpik	Jee	Smile	Ging
AVT	Mean (12.38)	6	6	11	13	14
(30)	SD (3.34)					
NVLT	86%	40%	60%	90%	93.33%	86.66%
Level 1	(26/30)	12	18	27	28	26
NVLT	86%	23.33%	33.33%	60%	80%	40%
Level 2	(26/30)	7	10	18	24	12

3.3.2 Background of the Participants

The five participants were between 18 and 20 years old and were from three

different faculties. They were monolingual Thai native speakers who learned English

as a foreign language. They had never lived in an English-speaking country or had

any foreign friends. Koko, Pukpik, Smile, and Ging graduated from Thai programs in

high school, but Jee graduated from a special program where she studied mathematics

in English in junior high school and studied biology in English in high school.

Specific information of their past English learning and how they usually learned

English vocabulary is described below.

Koko – He had studied English for 16 years. In primary school, he only studied vocabulary and wrote it when the teachers asked him to. In secondary school, the English courses were only lectures and homework. The teacher focused on the students who understood the lessons but neglected those who did not. He passed English lessons based on the completion of assignments. There was no chance to use English at all, and he tried studying English on his own with a self-taught English book. However, it did not work because he could not understand it. He learned English vocabulary by noting words he found on websites and social media platforms and learning their pronunciation, but he did not do this on a regular basis.

Pukpik – She had studied English for 12 years before entering university. She mentioned that her English learning in primary and secondary schools took place only in class, and she did not use English outside classrooms. All the teachers used Thai to teach. She tried to learn English vocabulary she came across in classes and on entertainment media by translating its meaning and memorizing it.

Jee – She had studied English for 12 years. In her past English learning, the teachers paid attention only to the students who understood the lessons, but overlooked those who did not. If she made mistakes or asked questions, the teacher looked down on her ability which made her afraid to share her thoughts in class. Jee studied English vocabulary from watching movies, playing games, listening to music, and reading English comic books. She used to chat with foreigners via social media applications.

Smile – She had studied English for 18 years. In the past, she studied English in a private school from nursery to Grade 3 and moved to a public school after that.

She had English tutorial lessons in Grade 12, but she said her English was still poor. She studied English vocabulary by watching movies on Netflix and listening to YouTube and podcasts.

Ging – She had studied English for 16 years. Her English learning in the past was similar to Pukpik's. She just studied in class and did not have a chance to use it. The courses were to cover the specified contents, but she could not follow them. She studied English vocabulary by watching movies and listening to music.

3.3.3 Research Ethics

This research adhered to research ethics and was conducted following the regulations of the Research Ethics Review Committee for Research Involving Human Subjects: The Second Allied Academic Group in Social Sciences, Humanities, and Fine and Applied Arts, Chulalongkorn University. Before asking the students to be the participants in this research, the researcher distributed the information sheet to inform them of the research objectives and data collection procedures. They were informed that they had flexibility to arrange the schedule with the researcher to ensure their convenience in participation. They understood that there was no risk in participating, and there was compensation for their time spent. Their participation was video- and audio-recorded, but the recordings were never shown to the public. They were assured that the data collected from them would be kept strictly confidential and there was no information to identify who they were as pseudonyms were used in the report. Also, the participants were informed that their participation in the research was on a voluntary basis and they had the right to withdraw from the research at any moment without advance notification or negative effects on them in any way. They could contact the researcher anytime to make further inquiries about their

participation and report any misconduct to the Research Ethics Review Committee for Research Involving Human Subjects: The Second Allied Academic Group in Social Sciences, Humanities and Fine and Applied Arts, Chulalongkorn University. After the participants received relevant information and agreed to take part in this research, they signed an informed consent form.

3.4 Instruments

The instruments were divided into screening instruments, research instruments, and data collection instruments. The screening instruments were used to select the participants. The research instruments were used in the dynamic assessment intervention. The data collection instruments were for collecting the data for analysis.

3.4.1 Screening Instruments

As mentioned before, this research selected the students who had low vocabulary knowledge to be the participants using two vocabulary tests. One was the adapted version of Pecorari, Shaw, and Malmström's (2019) Academic Vocabulary Test to measure academic vocabulary knowledge. The other was the New Vocabulary Levels Test (NVLT) by Webb, Sasao, and Ballance (2017) to measure general vocabulary knowledge. The reason to include the test for general vocabulary was that it added more information about participants. Their general vocabulary knowledge would contribute to the discussion of the findings as the participants would use general words to comprehend and produce the language in the tasks. The two tests and selection criteria were as follows.

3.4.1.1 The Adapted Academic Vocabulary Test

The adapted academic vocabulary test was used to investigate the academic vocabulary knowledge of the students, and it was also the major screening instrument to select the participants. The test was adapted from Pecorari, Shaw, and

Malmström's (2019) Academic Vocabulary Test (AVT) that assessed words selected from Gardner and Davies' (2014) Academic Vocabulary List (AVL), the source of the academic words in the present study. The original AVT had two equivalent forms: Form One and Form Two. The academic words in each form were ordered from the highest to the lowest frequency following the word rank in AVL. Each form contained 19 clusters of 57 items (1 cluster for 3 items). Due to its careful selection of words and comprehensive piloting and validating process, Pecorari et al. (2019) asserted the test could discriminate test takers' differing abilities from various contexts according to the considerable range of the test items' facility/difficulty indexes. Moreover, Pecorari et al. (2019) suggested that the two equivalent forms could be combined to yield a more reliable measure, but the items should be merged to maintain consistency in decreasing frequency. In addition, some items may be removed for some contexts. For instance, early items could be omitted for high proficient learners, whereas later items may be omitted for less proficient learners. No cut score for the threshold level was identified, and the test result could be used diagnostically.

Thus, the adapted version was created based on the two equivalent forms of AVT by Pecorari et al. (2019). Since each of the two equivalent forms contained words that were ranked from 203 to 2949 in Gardner and Davies' (2014) Academic Vocabulary List, the researcher selected clusters from both forms whose word ranks were between 200 and 1,000. Later items were discarded as they may be too difficult for all the students and yield no useful information. Furthermore, the words in the 1-500 and the 501-1000 frequency bands provide much higher mean frequencies in COCA-acad sub-corpus than the others. It means that they appear in academic texts more frequently than the other bands and deserve prior learning. The mean frequency is displayed as follows (Pecorari et al., 2019):

AVL frequency band	Mean frequency (COCA-all)
1-500	24110.1
501-1000	7055.8
1001-1500	3088.8
1501-2000	1512.5
2001-2500	769.7
2501-3200	330.6

The format of the adapted AVT followed the cluster format of the original AVT. It consisted of ten clusters, each of which had a set of three meaning items and a set of six words as the options. Test takers had to choose only three words to match each meaning. The scoring was only one or zero point for all items and the maximum score was 30 points. The reasons to choose ten clusters of 30 items were due to the available clusters in the two equivalent forms of Pecorari et al. (2019), the comparable number with the NVLT test, and the practicality. Because there are eleven clusters in the two equivalent forms whose word frequencies are in the first 1,000 word of the AVL, the researcher chose only ten clusters to make the number comparable to that of the NVLT, which was a well-known research-based vocabulary test. Besides, it was practical for students to finish ten clusters of 30 items before they became exhausted from doing the test. A sample item of the adapted AVT is shown below (See Appendix A for Adapted Academic Vocabulary Test).

1.   ___ get something   a. encourage
                                                           b. generate
    ___ produce something   c. obtain
                                                            d. perceive
    ___ see something in a certain way   e. publish
                                                            f. refer

Regarding the scoring criteria, Pecorari et al. (2019) did not indicate any cut scores for the AVT test. Consequently, this study followed Ishii and Schmitt's (2009) suggestion of diagnosing a student's vocabulary weaknesses by comparing the scores with the group norm. They considered it a sound practice because there were many factors affecting vocabulary learning, most of which tended to originate from the same learning environment of opportunities and limitations. Therefore, it was sensible to compare a student's performance to that of others in the same group. This study used descriptive statistics to analyze the scores, and the students' low scores were based on standard deviation (S.D.) indicating their relative standing in the group.

3.4.1.2 The New Vocabulary Levels Test (NVLT)

The NVLT by Webb, Sasao, and Ballance (2017) was adopted in this study to find the mastery of the general vocabulary because each level of the test was designed specifically for each 1,000 word family in Nation's (2012) BNC/COCA word family lists. It was also regarded as the most suitable test to measure the vocabulary size of EFL beginning and intermediate learners (School of Linguistics and Applied Language Studies, Victoria University of Wellington, 2021b). Nation (2001) considered the test suitable for determining learners' vocabulary readiness to learn vocabulary in the text. The NVLT was chosen because it was up-to-date due to recent words selected from Nation's (2012) BNC/COCA word family lists. The test consisted of five levels: the 1-1000 (1st level), 1000-2000 (2nd), 2000-3000 (3rd), 3000-4000 (4th), and 4000-5000 (5th) word-family levels. Each level consisted of ten clusters testing 30 words; each word was worth 1 point. To indicate mastery of each level, the test taker must gain 86% of each level's total score, or 25-26 out of 30 points (Webb, 2021). An example of a cluster from the 1000 word level is shown

below (Webb et. al, 2017, p. 37).

	boy	rent	report	size	station	thing
how big or small something is						
place buses and trains go to						
young man						

The present study used only the tests of the first and second levels because they targeted low proficiency students. Reaching mastery of the first level would guarantee that students knew basic words to perform the task. However, since Milton (2009) pointed out that students who know 2,000-2,500 words start to move from the beginner to intermediate levels, those who did not master the second level were regarded as beginners and were invited to be the study participants. However, it should be noted that all general vocabulary scores were considered after the academic vocabulary scores when recruiting the participants (See Appendix B for NVLT of the 1st and 2nd 1,000 Word Family Levels).

3.4.1.3 Validation of the Screening Instruments

The screening instruments included the New Vocabulary Levels Test (NVLT) by Webb, Sasao, and Ballance (2017) and the adapted academic vocabulary test based on the Academic Vocabulary Test (AVT) by Pecorari, Shaw, and Malmström (2019). The NVLT was a ready-made vocabulary test that incorporated Rasch analysis to make the test result unaffected by the test form and a group of people who took it, so the test was meant to be used widely for different test takers (Brown & Hudson, 2002). Moreover, its research was published in a quatile-1 Scopus indexed journal certifying high-quality research. Given that the present study used the test without any alteration and followed its recommended cutting score, its original validation and its trustworthy validation of the test remained. As for the adapted academic vocabulary

test, the researcher merged the items from its two original equivalent forms following Pecorari et al.'s (2019) suggestion for adapting the test for the diagnostic purpose of a particular context. Therefore, it seemed suitable to validate the adapted test once again before it was used. The researcher asked three experts to validate the test content validity. One expert was specialized in English vocabulary and the other two were specialized in language assessment. An Item-Objective Congruence (IOC) index was a tool for the experts to rate the congruence of the screening instruments, with scores ranging from -1 to 1 with meaning attached: appropriate = 1; not sure = 0; and inappropriate = -1. The item whose average score was ≥ 0.5 was accepted. In contrast, the item whose average score was < 0.5 was revised or rejected following the suggestions of the experts, or the researcher provided justification if the item was to be kept. The results from the expert validation revealed that the instructions of the adapted academic vocabulary test must be revised, an example should be provided, and a part of speech should be attached to the word "fast" in item 5 to avoid confusion about its word class. The researcher revised the adapted academic vocabulary test following the experts' comments.

3.4.2 Research Instruments

The research instruments in this study included DA tasks and DA mediation prompts, all of which were for conducting the DA intervention.

3.4.2.1 DA Tasks

The dynamic assessment (DA) tasks were designed for the participants to use vocabulary learning strategies (VLS) which were selected from the ones employed in recent empirical research dealing with beginner learners. During the tasks, the researcher and a small group of low proficiency participants jointly did them, and

dynamic assessment occurred through means of conversation, or dialogic mediation, which was the feature of the interactionist DA approach. The DA tasks were carried out under the instructional framework of the Cognitive Academic Language Learning Approach (CALLA) in which they appeared in the instructional stages of practice and expansion.

There were four DA tasks: a morphology task, a part of speech task, a guessing meaning from context task, and a sentence writing task. Different tasks were to teach different constructs of vocabulary knowledge under the form, meaning, and use areas defied by Nation (2011). Having different tasks targeting multiple vocabulary items offered a few advantages in this study. First, each aspect of vocabulary could be emphasized clearly in each test. Second, different tasks allowed different vocabulary learning strategies to be used which followed Gu's (2020) suggestion of examining strategies for learning different aspects of word knowledge. Last, the participants could learn many words in a single test task which seemed suitable for a short-term intensive tutorial.

Each task included a group dynamic assessment (GDA) task and an individualized DA task. The group DA task was the main intervention of the study. There were regular tasks and transfer tasks. The regular tasks were for the participants to internalize the knowledge and the transfer tasks were to see to what extent learners had internalized and sustained the development when doing more complicated tasks (Ebadi & Saeedian, 2016; Poehner & Lantolf, 2013).

The individualized DA task was for the researcher to do the task one-on-one with each participant. It came after the participants did the group DA tasks to further investigate the gain from group dynamic assessment (GDA) at an individual level.

The task details, the formats of the regular and transfer tasks, examples of task items, and the constructs of vocabulary knowledge of each task are described below.

A. Morphology Task

The morphology task was designed for students to analyze affixes and roots. The affixes in this task referred to derivational affixes including prefixes and suffixes because they formed new meanings (Sasao & Webb, 2017) and were suitable to help the participants know more words. The task followed Nation's (2011) recommendation on word parts. According to him, learners should recognize the affixes and roots in words, know the meaning of the parts, and be able to retell the word meaning by connecting the meanings of the parts to the word. As a result, the task was designed for the participants to exercise these processes. Moreover, the words were in a contextual sentence to resemble real-world language use and guide the word's meaning. The constructs of the morphology task were the receptive word part (form) and the receptive form and meaning (meaning), and the receptive concept and referent (meaning) according to Nation's (2011) constructs of vocabulary knowledge of form, meaning, and use areas. The participants were to recognize parts of a word, know their meanings signaled by the word form, and know the word meaning in a particular context that it occurred. To select affixes for learners, Coxhead (2011) suggested introducing affixes by frequency, and Carlisle (2000) pointed out that transparent derivatives are presumed to be easier to decompose than those with orthographic and phonological changes. Carlisle (1988, as cited in Kraut, 2015) classified four changes of the roots after they are combined with derivational morphemes. The first one has no change in spelling or phonology e.g., bio → biology. The second one has an orthographic change e.g., lazy → laziness. The third one has a

phonological change e.g., heal → health. The fourth one has both orthographic and phonological changes such as long → length. These changes interact with learners' abilities to recognize and produce the correct form, but Laufer (2001) explained that complex derivatives usually cause difficulty in learning words. Prior to doing the DA tasks, therefore, the researcher taught the concept of prefixes and suffixes, provided the lists of common prefixes and suffixes, modeled analyzing affixes and roots strategy, and had the participants practice doing exercises with the researcher (See Appendix E for Materials for Presenting Vocabulary Learning Strategies for DA Tasks). After that, the researcher informed them to use this strategy in DA tasks. The formats of the DA regular and transfer tasks were explained below.

A.1) Regular Task (Morphology Task)

The regular task was adapted from a decomposition task by Carlisle (2000) and Kieffer-Lesaux (2008) that students were required to decompose the given derivatives to get the roots and affixes. It followed with a receptive skill of word parts because students were to recognize the parts of a word (Nation, 2011). The receptive skill of the decomposition task was likely more suitable to beginners than a more difficult productive skill of a derivation task that required producing derivatives from the roots (Carlisle, 2000), and students may need a large vocabulary size to do it (Milton, 2009). As for the regular task in this study, transparent derivatives, or the ones with no change of the roots, were selected. The participants read a sentence containing a derivative and analyzed the sentence meaning, word meaning, root, and affix(es) as well as identified the part of speech of the derivative and the root. The derivatives and roots were checked to ensure they had close meaning. The sentences were taken or adapted from widely used dictionaries including Oxford Learner's

Dictionary, Cambridge Dictionary, Collins Online Dictionary, Longman Dictionary of Contemporary English Online, Macmillan Dictionary, and Merrium-Webster Dictionary since those sentences were created to aid the understanding of the words. Nevertheless, students could use an English-Thai dictionary to find the meaning of some words they did not really know. The regular task consisted of eight items, as exemplified below.

Example

Item 5. At a time of economic **uncertainty (…)**, risk-taking can seem difficult.

root: _____ (…)   meaning: _____

affix: _____   meaning: _____

affix: _____   meaning: _____

A.2) Transfer Task (Morphology Task)

The format of the transfer task was similar to that of the regular task except that the academic words were derivatives that included orthographic and/or phonological changes of the roots. When the participants decomposed them to retrieve the root, they could consult a dictionary for correct spelling and sound. The transfer task consisted of eight items (See Appendix F for Morphology Task), as shown below.

Example

Item 5. Animals in the zoo have lost the **capability (…)** to catch food for themselves.

root: _____ (…)   meaning: _____

affix: _____   meaning(s): _____

affix: _____   meaning(s): _____

B. Part of Speech Task

The part of speech task required the participants to use the analyzing part of speech strategy to learn academic words that appeared in collocations, or a group of words that often occurred together than random (Lewis, 2000). In other words, the part of speech of the collocations, which put them in the syntactic structure, was the means to study academic words. Based on collocations grouped by Benson, Benson, and Ilson (1997), the collocations in this task referred to lexical collocations, not the grammatical collocations that included a preposition and grammatical components such as clauses and infinitives. According to Nguyen and Webb (2017), adjective-noun and verb-noun collocations were problematic among pre-intermediate to upper-intermediate Vietnamese EFL university students. In addition, the four major collocation types among the 2,469 collocations in the Academic Collocation List (ACL) by Ackermann and Chen (2013) were adjective-noun (1773), verb-noun (310), adverb-adjective (124), and adverb-past participle (124), respectively. Therefore, the part of speech tasks in this study included these four types of collocations.

Regarding forming collocations in this study, the node words were academic words from Gardner and Davies' (2015) Academic Vocabulary List (AVL) and from four word classes: noun, verb, adjective, and adverb. Their collocates were either academic or general words. For example, the word *social interaction* consisted of a general word and an academic word, but the word *natural source* had two academic words. The criteria for forming collocations followed Nguyen and Webb's (2017) study. First, the minimum collocation frequency in Corpus of Contemporary American English (COCA) is 50. Second, the minimum mutual information score was 3.00 to consider two words as a collocation. In this study, the collocations were

presented in contextual sentences to provide instances of real-world usage. The context was taken from authentic texts in COCA, which was the source of Gardner and Davies' (2015) AVL. The constructs of the part of speech task were the receptive form and meaning aspect (meaning) and the receptive grammatical function aspect (use) according to Nation's (2011) constructs of vocabulary knowledge of form, meaning, and use areas. The participants were to know the collocation meaning that suited the contextual sentence and select the part of speech of the target academic word and its collocate to match the grammatical pattern in which they occurred. Before the participants did the DA tasks, the researcher taught them parts of speech of the four collocation types, namely adj-n, v-n, adv-adj, and adv-past participles in sample sentences to ensure their understanding, which followed the receptive treatment of Webb and Kagimoto (2009) proved effective for beginners. Then the participants did some exercises with the researcher to familiarize themselves with the concept (See Appendix D for Materials for Presenting Vocabulary Learning Strategies for DA Tasks). After that, the researcher informed them that they needed to use the analyzing part of speech strategy to learn academic words in collocations. The formats of the DA regular task and transfer task are described below.

B.1) Regular Task (Part of Speech Task)

The regular task was in a form of a cloze task that provided the contextual sentence and two blanks to fill out with the collocation. There were two groups of options provided. The options contained words in different parts of speech or forms. The participants had to choose one word from each group and put them in the sentence to make it meaningful and grammatically correct. The order of the collocation was guided by letters A and B to ease the cognitive load and the group

that contained the target academic word was boldfaced. The participants could consult a dictionary to check the part of speech. They must identify the type of collocation such as adjective-noun. The regular task had seven items. An example is shown below.

Example:

Item 5. We are a _(A)_____ _(B)_____ software company who continue developing and improving our products.

A) **rapid, rapidly, rapidity**   B) grow, growing, growingly

Type of collocation: _____

B.2) Transfer Task (Part of Speech Task)

The transfer task was quite similar to the regular task except that the order of the collocation was not predetermined by the letters A and B. The participants had to arrange the two words to form a correct collocation, so the transfer task demanded more cognitive load.

The group that hosted the target academic word was boldfaced. After the participants put the correct collocation in the sentence, they must identify the collocation type. An example below showed that the collocation was rural development, and the type was adjective-noun. The transfer task had seven items (See Appendix G for Part of Speech Task).

Example:

Item 3. We should boost _____ _____ to narrow the gap between this area and the city.

                rural, rurally, ruralism   develop, developed, development

Type of collocation: _____

C. Guessing Meaning from Context Task

The guessing meaning from context task was for the participants to use the guessing meaning from context strategy to study academic words. Although this strategy generally required a good command of reading skills and vocabulary knowledge, previous research, albeit a small number, shed light that beginners could use this strategy when the reading materials contain vocabulary of their level (Sabbah, 2018; Shahar-Yames & Prior, 2018). Therefore, in this study the vocabulary in the contexts were simplified to match the participants' existing vocabulary level. The simplification agreed with Milton's (2009) suggestion that many high-frequency words were needed to help learners learn from the context because they could not learn from words they had not encountered. Moreover, Chang and Millett (2015) said that beginners had a limited capacity for working memory. If they processed decoding and comprehension simultaneously while reading, one or more components may not be fulfilled.

The context was taken from authentic texts in the Corpus of Contemporary American English (COCA) from which Gardner and Davies (2014) created the Academic Vocabulary List (AVL). Since this study selected target academic words from the AVL, it seemed reasonable to choose the academic texts from the source that the AVL was developed. To simplify the context, most of the words must be in the 1st 1000 word family level of Nation's (2012) BNC/COCA word family lists, but the content was the same. The reason to choose the BNC/COCA word family lists was that they were the source from which the NVLT, which measured the participants' general vocabulary, was developed. Therefore, the word level in the context could be compared with the participants' level of general vocabulary. To determine the word family level, the program AntWordProfiler from Laurence Anthony's website was

used, and the BNC/COCA word family lists were the default to check the passages. The clues in the context consisted of eight types of discourse clues: description, cause/effect, example, contrast/comparison, modification, appositive, words in series, and association, which were reduced from the 12 types of discourse clues from Sasao (2013) because some of the original clues were distinguished by fine details and likely served the same purpose. Moreover, the more manageable number would rather prevent confusion for the low proficiency students. According to Nation's (2011) constructs of vocabulary knowledge of form, meaning, and use areas, the constructs of the guessing meaning from context task were the receptive concept and referent aspect (meaning) and the receptive form and meaning aspect (meaning). The participants were to understand the context, guess the target word meaning, and know the word form. Before the participants did the DA tasks, the researcher taught the discourse clues and modeled the guessing meaning from context strategy as an example to the participants, so they were prepared for the tasks (See Appendix D for Materials for Presenting Vocabulary Learning Strategies for DA Tasks). The formats of the DA regular task and transfer task are shown below.

C.1) Regular Task (Guessing Meaning from Context Task)

The regular task consisted of items in a format of a short passage of around 50-60 words. All the context words were within the BNC/COCA 1st 1000 word frequency level except the academic word. This was to ensure that the passage allowed successful guessing to occur because 98% of the words must be comprehensible (Nation, 2011). Therefore, the participants were supposed to know 49 in 50 words (98% text coverage), except for the academic word. However, some common borrowed words such as *website*, *topic*, and *unit* were kept unchanged

although they were in other frequency levels. For each passage, only one clue was in a passage, and it may be within the same sentence of the target academic word or in another sentence. In a single task, the word count of all the passages was between 300 and 400 words which was the recommended length for a reading passage of A2+ CEFR level (Mitchel, 2008). Thus, this total word count may not make the participants too tired from reading.

To use the guessing from context strategy, Nation (2011) pointed out that it is important that learners do not know the meaning of the word. Replacing the word with a nonsense word or leaving it blank is recommended. In this study, the target word was left blank, but multiple choices were also provided to prevent digression of the answer. However, the participants had to read the passage to guess the meaning of the missing word before choosing what they thought was the correct choice. To complete each item in the task, the participants guessed and wrote the word meaning in Thai. After that, they were allowed to use a dictionary to find the meanings of the choices and choose the correct word form. The regular task contained six items, with an example shown below.

Example:

Item 3. This website has a lot of good information for teachers to put in the science program at school. Students can learn many things such as oil, forest fire, and health. Although the information can be used to make a ……………… science program, most schools use two to three units a year.

What is the word meaning? _____

a. dominant   b. visible   c. statistical   d. comprehensive

C.2) Transfer Task (Guessing Meaning from Context Task)

The format of the transfer task was similar to that of the regular task in that each item was in a form of a 50-60-word short passage. Most words were in the 1st 1,000 word level of the BNC/COCA word lists except that five words were either in the 2nd and 3rd 1000 levels. These five words plus the target academic word resulted in six possible unknown words, which made the remaining words yield 88%-90% text coverage which was an undesirable condition for successful guessing. For example, knowing 44 out of 50 words yielded 88% of text coverage, and knowing 54 out of 60 words yielded 90% which was still lower than the minimum percentage for guessing from context (95%) suggested by Liu and Nation (1985). The transfer task contained six items (See Appendix H for Guessing Meaning from Context Task). An example is provided below.

Example:

Item 3. Throwing is often considered a ……………… or basic motor skill. However, a variety of different exercise routines should be implemented throughout the year to teach students different ways of getting and staying fit such as exercise to music, and fitness games. Teachers should use creative activities to make students want to exercise.

What is the word meaning? _____

a. formal   b. creative   c. fundamental   d. alternative

D. Sentence Writing Task

The sentence writing task was for the participants to use a new word to form a sentence as it was a vocabulary learning strategy to consolidate the word that learners had encountered (Schmitt, 1997). The strategy implied that learners must know the

word meaning before writing. For example, Zou (2017) provided glosses of the target words to non-English major, intermediate Chinese freshmen to write sentences and compositions. The glosses included the parts of speech and definitions from renown dictionaries. For instance, Jafari, Izadpanah, and Rahmani (2018) provided first language definitions of the target words to intermediate students in Iran to write sentences. The task in this study provided the word meaning to the participants before they wrote a sentence. The participants could use a dictionary to search for other words to put in the sentence to make it meaningful, but they were not allowed to use a translation website. However, an expert who validated the task and who taught at the university where the research took place mentioned that sentence writing was challenging for low proficiency students. The students should not write alone, and grammatical patterns should be provided. Thus, the participants wrote in a pair and there were grammatical patterns to guide them.

The research employing a sentence writing task for vocabulary learning came from the underlying concept of Laufer and Hulstijn's (2001) Involvement Load Hypothesis asserting that tasks with high learner involvement better helped them retain words. The participants were to write a sentence so they were highly involved in planning the sentence and combining words together (Gobet et al, 2001). The group dynamic assessment (GDA) occurred when the participants reviewed their sentences with the teacher (mediator). The teacher asked for a written sentence from a pair and engaged the other group members to check it together. Then the other group members could compare their sentences and ask questions for clarification. Moreover, using GDA at the revision stage followed previous research employing DA with writing such as Poehner et al. (2018), Rahimi et al. (2015), and Aljaafreh and Lantolf (1994)

and research employing DA to teach vocabulary through a writing task such as Mirzaei et al. (2017).

According to Nation's (2011) vocabulary knowledge of form, meaning, and use areas, the constructs of the sentence writing task include the concept and referent aspect (meaning), the grammatical function aspect (use), and the collocation aspect (use). All constructs were for productive skills. In this study, the participants were to understand the concept and the referent to which the word referred, use the word correctly due to its grammatical function, and use other words with the target word correctly. Before the participants did the tasks, the researcher taught them the functions of a noun, a verb, an adjective, and an adverb, as well as their positions in a sentence and a basic sentence structure. Also, the researcher modeled the strategy and had the participants practice writing with the researcher (See Appendix D for Materials for Presenting Vocabulary Learning Strategies for DA Tasks). The formats of the regular and transfer tasks are described below.

D.1) Regular Task (Sentence Writing Task)

Each item in the regular task supplied the participants with the part of speech, the first language meaning (Thai), the English definition of the target academic word, and two sample sentences containing the word along with grammatical patterns. Only one Thai meaning and one English definition were presented to avoid confusion among low proficiency students because learning a word with several meanings at a time could be difficult for these learners (Laufer, 2001). The English definition was selected from a common definition among well-known online dictionaries such as Longman Dictionary of Contemporary English Online, Cambridge Dictionary, and Collins Online Dictionary. The Thai meaning was based on the English definition and

was taken from a reliable online dictionary https://dict.longdo.com/. Although research by Park (2018) cautioned about low proficiency students copying sample sentences, the present research used sample sentences to guide the participants to see how the word was used in context and its syntactic structure so as to increase their confidence to use the word in their writing. When they wrote, they could use a dictionary to find other words to put in their sentences and check the spelling. There were five items in the regular task. An example is given below.

Example:

Item 2. **specifically** (adv)　　 = โดยเฉพาะ

　　　　　　　　　　　 = for a particular reason, purpose, etc.

Example: Jantra specifically designed these jeans for women.

　　　　 S　+　　 Adv　+　 V　 +　 Object

　　　 They bought the land specifically to build a hotel.

　　　　 S　+　　 V　 + Object +　 Adv

Your sentence: _____

D.2) Transfer Task (Sentence Writing Task)

The transfer task was more challenging for the participants because there was no sample sentence provided. However, the word was still supplied with a Thai L1 meaning, an English definition, and a guiding grammatical pattern. The grammatical pattern was provided to avoid the deficit in syntactic knowledge of writing that might impede the intended message. However, the participants did not have to follow the guiding grammatical pattern strictly. They could make changes in their sentence as long as the word's grammatical function (n, v, adj, or adv) was correct and the sentence was comprehensible. There were five items in the transfer task (See Appendix I for Sentence Writing Task), with an example as follows.

Example:

Item 3. **simultaneously** (adv) = โดยเกิดขึ้นพร้อมกัน**,** ในเวลาเดียวกัน

= happening or being done at exactly the same time

Guiding grammatical pattern: S + V + Adv

Your sentence: _____

In summary, the four DA tasks, namely the morphology task, the part of speech task, the guessing meaning from context task, and the sentence writing task were designed for different vocabulary learning strategies to be used. They were analyzing affixes and roots, analyzing part of speech, guessing meaning from context, and using a new word to form a sentence. Each task taught different constructs of vocabulary knowledge according to the form, meaning, and use areas defied by Nation (2011) as shown in Table 3.2.

Table 10 *The vocabulary constructs of the four DA tasks*

Task	Area	Construct	Skill	Guiding questions
1. Morphology	Meaning	Concept and Referents	Receptive	What is included in the concept?
	Meaning	Form and meaning	Receptive	What meaning does this word form signal?
	Form	Word parts	Receptive	What parts are recognizable in this word?
2. Part of Speech	Meaning	Form and meaning	Receptive	What meaning does this word form signal?
	Use	Grammatical functions	Receptive	In what patterns does the word occur?
3. Guessing Meaning from Context	Meaning	Concept and Referents	Receptive	What is included in the concept?
	Meaning	Form and meaning	Receptive	What meaning does this word form signal?
4. Sentence	Meaning	Concept and	Productive	What items can the concept

Writing Task		Referents		refer to?
	Use	Grammatical functions	Productive	In what patterns must we use this word?
	Use	Collocations	Productive	What words or types of words must we use with this one?

E. Academic Words for DA Tasks

The target academic vocabulary was chosen from Gardner and Davies' (2014) Academic Vocabulary List (AVL) because of its sound methodology which made it appropriate for beginners. Moreover, the AVL used lemma as a counting unit and was considered suitable for beginners and intermediate learners of English (Brezina & Gablasova, 2015; Gardner & Davies 2014; Schmitt & Zimmerman 2002). However, the first 1,000 words out of the total 3,015 words were selected to be in the DA tasks because the 1-500 and the 501-1000 frequency bands provided much higher text coverage than the other bands whose coverage reduced considerably. Moreover, the first 1,000 words represented the same scope as the screening test (the adapted version of Academic Vocabulary Test). However, the target words did not repeat the words that appeared in the coursebooks of the two English foundation courses to avoid the memory effect of having learned them. The two courses included the first English foundation course that the participants retook in the summer semester, and the second English foundation course that they were currently taking in semester one. The criteria for selecting the target academic words were as follows:

- The words were not in the reading and listening passages, grammar and vocabulary contents, and exercises as well as speaking and writing tasks of the two English foundation courses.

- In each task, half of the words came from the 1-500 frequency bands and

the other half were from the 501-1000 frequency bands.

- There must be four word classes: noun, verb, adjective, and adverb in each task.

In addition, the different tasks in this study, namely the morphological task, part of the speech task, the guessing meaning from context task, and the sentence writing task, largely influenced the word selection from the AVL list. Specifically, the researcher had to purposively select words to match the morphology task because only some words in the AVL list contained affixes which were mostly suffixes and met the criteria mentioned above. Likewise, the part of speech task made the researcher select single words from the AVL list purposively to form acceptable collocations. However, the guessing meaning from context task and sentence writing task did not have restrictions on word properties as the previous two tasks, so the researcher randomly selected words by using the Random Integer Set Generator in http://www.random.org/ to reduce a possible bias in selection first and then manually selected the words appropriate to the task. As for the number of academic words in each DA task, Hunt and Beglar (2002) suggested that five to seven new words should be learned at a time to be students' active vocabulary due to the principles of teaching and learning vocabulary. In this study, the academic words were put in the tasks from the higher frequency rank to the lower one according to the AVL, which was their source. The number of academic words in each task varied depending on the task requirement and the time to complete them. There were between five and eight words in a single task (See Appendix C for Academic Words in DA Tasks and Appendix C for Academic Words in Pretest (Delayed Posttest) and Immediate Posttest).

3.4.2.2 DA Mediation Prompts

For each task, there were DA mediation prompts to gradually help the participants employ the vocabulary learning strategy to learn academic words. The DA mediation prompts in this study followed Aljaafreh and Lantolf's (1994) suggestion that effective mediation for interactionist DA should be graduated, dialogic, and contingent. Graduated mediation proceeded from the most implicit to explicit assistance so that it allowed learners to struggle to stretch their abilities (Infante & Poehner, 2019). Dialogic mediation used dialogues as the means to maximally attune the mediation to learners' needs at any moment. Contingency meant that mediation was offered only when needed and was withdrawn when the learner started to be able to perform independently. Before giving the prompts, the researcher asked the participants to answer the test item by themselves first to reveal their actual ability. Then, when they struggled to answer, the mediation prompts were given from the most implicit to the most explicit prompts, that is, the least to the most assistance following the DA principle. The researcher adjusted the prompts to match the participants' answers during the interactions and simplified the language to the participants' level. The prompts for each task were related to the task design, as can be explained as follows.

- The prompts for the morphology task were adapted from Harris, Schumaker, and Deshler's (2011) strategic morphological instruction. They asked the participants to identify the number of word parts, the root and affix, and the meaning and part of speech of word parts, which seemed to match the decomposition task in this study. Likewise, the assistance from the prompts was graduated from the word level which was broader to

the part level which was more specific, and this graduation was considered

congruent with the DA principle.

- The prompts for the guessing meaning from the context task were adapted

   from Teo's (2012a) prompts to predict vocabulary meaning. They started

   from the general topic of the passage, the sentence, phrase, and word

   levels, respectively. They likely represented a reverse order of Clarke and

   Nation's (1980) strategy of guessing from context which started from the

   part of speech, immediate context in the same clause or sentence, and

   adjoining clauses or sentences. In other words, the DA graduated prompts

   started from a wider context and narrowed down to the word level.

- The prompts for the part of speech task and sentence writing task were

   adapted from Darvin, Herazo, and Sagre's (2017) categorization of DA

   prompts dealing with errors and Aljaafreh and Lantolf's (1994) mediation

   prompts guiding the revision of student writing. The part of speech task

   and sentence writing task had a related construct of the word's

   grammatical function. The part of speech task dealt with the grammatical

   pattern in which the word occurred (receptive skill), and the sentence

   writing task dealt with the grammatical pattern to use the word (productive

   skill). Thus, prompts dealing with errors could be used after the

   participants chose answers or wrote a sentence. They graduated from

   pointing out the existence of the error, location of the error, nature of the

   error, to explaining how to correct the error and providing a correct

   answer. Moreover, the focus of the sentence writing task was separated

   into two levels: semantics and grammar. The prompts were given to the

semantic level before the grammatical level. (See Appendix J for Mediation Prompts for DA tasks).

3.4.2.3 Validation of Research Instruments

The research instruments included the selected academic words, four DA tasks, namely the morphology task, part of speech task, guessing meaning from context task, and the sentence writing (each task included two GDA tasks and one individualized DA task), the mediation prompts, the instructional framework, and the materials for presenting vocabulary strategies. Three experts who validated the research instruments included an expert who was specialized in dynamic assessment, another expert who was specialized in English vocabulary, and the other expert who was specialized in English language instruction. The third expert also taught students in the context of the study. All of them checked the content validity of the research instruments by using an Item-Objective Congruence (IOC) index. The criteria for checking ranged from -1 to 1 with the meaning attached: inappropriate, not sure, and appropriate, respectively. Two in three experts had to agree with the statement in each item for acceptance. In other words, the average score of ≥ 0.5 meant the item was accepted, while the average score of < 0.5 meant the item needed to be revised following the experts' suggestions, or the researcher had to provide justification to keep the item. Since the DA tasks were viewed as tools to improve the process of learning rather than a test to collect scores to compare the students' abilities in a numerical form, item statistics of a test such as difficulty and discrimination indexes were considered unnecessary.

The results of the validation were mainly for the revision of the four DA tasks. Regarding the morphology task, the researcher revised the directions and the sample

items to help the participants better understand the task requirements. One word in the regular task (substantially) was replaced with another word (importantly) as this task needed only a derivative whose root was not changed in sound or spelling. As for the part of speech task, the task name was used instead of the collocation task to match the analyzing part of speech strategy. Two experts commented that the previous format of the transfer task which required both unscrambling a sentence and forming a collocation seemed to be too difficult for the participants. Therefore, the researcher changed the format of the transfer task to resemble the regular task but made it slightly more challenging by not telling which word in a collocation came first. In the guessing meaning from context task, the strategy name "guessing meaning from textual context" was changed to "guessing meaning from context" to match the task name and avoid confusion of the participants. The directions were minimally adjusted. The major revision was changing the task format from without multiple choices to having multiple choices, because the old version confused the experts about what exactly the participants must do. If the participants had to both guess and find the exact word form without the choices given, the task would be too challenging for them. The sentence writing task also had a major revision in the task format. One expert who was the English lecturer at the university campus where the participants studied suggested that a sentence structure should be provided in the materials that presented the strategy and in the task items. Moreover, the mediation prompts were modified to have two levels: semantics and grammar which helped the researcher give the prompts systematically. One expert asked about clear criteria for assessing the written sentences which reminded the researcher to inform the participants of the priority of the semantic level than the grammatical level. Another expert commented

that the researcher should show more examples and how to rewrite or compose a sentence when giving feedback. The directions were modified to include the use of a dictionary to find the correct forms of words to put in a sentence and examples of the word use.

3.4.3 Data Collection Instruments

The data collection instruments included a demographic questionnaire, a pretest, an immediate posttest, a delayed posttest, recordings of DA sessions, verbal report probes, field notes, students' diaries, an attitude questionnaire, and a semi-structured interview protocol.

3.4.3.1 The Demographic Characteristics Questionnaire

The demographic characteristics questionnaire was created to collect basic information of the participants which might influence and account for each participant's performance. The questionnaire was adapted from Siwathaworn (2018) and was written in English and Thai to aid the participants' understanding. The participants answered the questionnaire individually after they agreed to participate and signed the informed consent form. The researcher was available to clarify any points raised. There were nine questions and most of them were open-ended, eliciting data including name, faculty, age, the length of time studying English, high school program, history of going abroad, foreign friends and their nationalities, opportunities to use English in daily life, and English vocabulary learning (See Appendix L for Demographic Characteristics Questionnaire).

3.4.3.2 The Academic Vocabulary Pretest (Delayed Posttest) and Immediate Posttest

There were two static tests in this study: the academic vocabulary pretest (which also served as the delayed posttest) and the immediate posttest. The

quantitative analysis of the test scores without the mediator's assistance would supplement the qualitative analysis of the DA tasks to increase the trustworthiness of the results. The test comprised four parts: morphology, part of speech, guessing meaning from context, and sentence writing, which followed the four tasks in the intervention.

Regarding the number of items, each test consisted of 16 items for all four sections. Each section consisted of four items for eight points which made thirty-two points in total. The number of 16 seemed reasonable as it may not make students become fatigued, which was likely to cause error variance contaminating their true scores (Bachman, 1990). The researcher estimated that the 16 items should be manageable within 40 minutes, although Waring (2021) suggested administering vocabulary tests without a time limit. Moreover, the 16 items in the pretest and the other 16 items in the immediate posttest covered 32 words, or almost half, of the 62 taught words during the intervention. (See Appendix M for Academic Vocabulary Pretest (Delayed Posttest) and Appendix N for Academic Vocabulary Immediate Posttest).

The tested words came from the academic words taught during both group DA and individualized DA of the four tasks in the intervention. However, the same words of a particular task did not appear in the same section of a test; for example, words in the morphology task were not in the morphology section of the test but may appear in the part of speech, guessing meaning from context, or sentence writing sections. The test words in the pretest and immediate posttest were fairly equivalent in terms of the four main word classes: noun, verb, adjective, and adverb and their frequencies in the Gardner and Davies' (2014) AVL, which was their original source. The test words in

each section were presented from high to low frequency. The words in the pretest were not the same as those in the immediate posttest to prevent students' memorization of words. The pretest was used again as the delayed posttest as these two tests were administered further apart, so the memorization effect was least likely (See Appendix C for Academic Words in DA Tasks, and Appendix D for Academic Words in Pretest (Delayed Posttest) and Immediate Posttest).

The test format resembled the four DA tasks in the intervention as both had the same constructs, but there were small alterations to suit the independent test taking. The difficulty level of the pretest and posttests was equal to the regular tasks in the intervention, because the regular tasks aimed for the vocabulary knowledge that the participants should internalize through dynamic assessment.

Each sentence in the morphology section contained a target word, and the participants had to specify the Thai meaning of each word based on the contextual sentence and identify its root and affix. The contextual sentence was adapted from example sentences in dictionaries such as Longman Dictionary of Contemporary English, Cambridge Dictionary, and Collins Dictionary to make the language level comprehensible for low proficiency students. The target words included the words with and without changes in sound/spelling after they were combined with derivational morphemes. Although the morphology section included the element of its transfer task (changes in word sound/spelling), it was considered acceptable since the changes were the words' intrinsic properties.

The second section, part of speech, had incomplete sentences in which the participants must select the correct collocations to fill. The nodes of collocations were academic words. The collocation types included the four types taught during the task:

adj-n, v-n, adv-adj, and adv-past participle. The sentences were taken from Corpus of Contemporary American English, which was the source of Gardner and Davies' (2014) AVL and provided the collocation of the selected academic words in the study, but the language was adapted to make it easier.

The third section, guessing meaning from context, contained passages of 50-60 words taken from COCA and blanks that needed academic words that matched the contexts. The words in the context were adjusted to the 1st 1000 word family to yield 98% text coverage which supported successful guessing from context strategy (Nation, 2011). The clue type in each passage was different. The choices were provided in a cluster format because the tested words were restricted to the words taught in the tasks which resulted in a limited number of words of the same part of speech to create a multiple-choice format, plus some words have been used in the other sections of the test. Given that the cluster format had a drawback of item dependence because a correct answer of any items in the cluster increased the possibility of getting the other items correct whether by knowledge or guessing (McLean & Kramer, 2015), distractors were included and were likewise taken from the words taught during the tasks, so the participants knew them.

The last section, sentence writing, required the participants to write a sentence incorporating the given academic word. The part of speech, Thai and English definitions, and a guiding grammatical pattern were provided, but there was no sample sentence to prevent the participants from copying it. After the participants finished writing the English sentence, they had to translate it to Thai so the examiner could determine whether they could use the word correctly to its concept and communicate their intended meaning or not. The scoring rubric was adapted from

Stubbe and Nakashima (2017) who did research on using sentence writing to determine the Japanese high beginner first-year students' understanding of English vocabulary.

3.4.3.3 The Recordings of DA Sessions

The interaction during GDA and individualized DA was video- and audio-recorded and transcribed for a thorough analysis of academic vocabulary learning that occurred through interactions in the DA tasks. The transcriptions included a mixture of English and Thai because the researcher used code-switching between the two languages while conversing with the participants, who had low proficiency in English, to aid their understanding. The recordings of DA sessions provided the main data for this study to investigate how dynamic assessment enhanced the academic vocabulary knowledge of low proficiency students. Therefore, the conversation between the teacher and students doing the DA tasks was transcribed verbatim to include certain extra-linguistic features that indicated subtleties of communication such as pauses, false starts, laughter, repetition of words, and non-verbal behavior, although they may not be as detailed as work of conversation analysis. It was expected that both linguistic and extra-linguistic features provided a comprehensive picture of the interactions that occurred during DA which could lead to a sound judgment of the results. The transcription conventions were adapted from Infante and Poehner (2019), and they were applied to both English and Thai utterances in the recordings, as follows.

(comments)   transcriber's comments, includes non-verbal behavior

?   a question, rising intonation

--   self-correction, truncated speech

[ ]   overlapping talk by more than one speaker

(silence...seconds) length of pauses in seconds

3.4.3.4 The Verbal Reports

The verbal report is an introspective process in which individuals report on their cognitive processes during task performance, and it must be done soon after the event so that the recall is as accurate as possible (Gass & Mackey, 2016). In this study, the verbal report was used to ask the participants to clarify their thoughts after each item when a misunderstanding occurred before moving to the next item, so their memories did not mix up. The participants may be asked to clarify their reasoning to arrive at the answer. Also, the researcher monitored the facial expressions and gestures of the participants and noticed whether there was a sign of doubt that could be clarified.

The verbal report was regarded as an introspection. Shavelson, Webb, and Burstein (1986) classified introspection into three types: think-aloud, self-observation, and stimulated recall, all of which were used to trace cognitive processes. Think-aloud was for the participant to talk about their thoughts simultaneously as he/she was doing the task. Self-observation occurred after the task completion. The participant was asked what he/she was thinking but without a stimulus. A stimulated recall occurred after an event and with a stimulus such as a video recording. It required elaborate training and preparation from the interviewer and participants. In this study, the verbal report referred to self-observation because it facilitated the flow of each DA task, and it did not need much preparation as stimulated recall and did not interrupt the graduated sequence of DA mediation prompts as think aloud. Self-observational data were from the participants analyzing what they were thinking during the task

(Pressley & Afflerbach, 1995). They were usually elicited through directed questioning toward a specific event, issue, or thought (Ward et al., 2020). In this study, a guideline for probes was adapted from Suss et al. (2014) and Ward et al. (2020) (See Appendix M for Verbal Report Probes). However, not all the probes were used at once. The researcher used some of the probes that matched ambiguous students' interactions. The Thai language was the means for the verbal report, so the participants could express their thoughts without any language barrier.

3.4.3.5 The Researcher's Field Notes

Field notes were written by the researcher to note important information that was observed from the students' participation during the DA session for reflection. The data from field notes represented the researcher's view and were triangulated with the participants' verbal reports, diaries, and the recordings of DA tasks. According to Phillippi and Lauderdale (2018), field notes data added thick and rich descriptions of the context and improved the depth of qualitative findings. In addition, Schwandt (2007) pointed out that a field note was a tool to record activities, behaviors, and other features of observation to help the researcher remember the phenomenon being studied and create meaning and understanding of it. Although field notes could be written during the observed event, the researcher wrote a filed note after each DA session for both group and individual sessions so that the researcher could concentrate on giving the mediation prompts and conversing with all the students during the tasks. After each DA session, the researcher wrote small notes right away because a note should be written while the memories were still fresh (Richards, 2003). Then, it was expanded to a fuller description as soon as possible leaving a few events to occur between a note and a field note (Richards, 2003).

Regarding what to write in the field note, Phillippi and Lauderdale (2018) proposed a guideline that it should include the setting, participants, interview, and critical reflection. USC Libraries (2021) guided that field notes should consist of two main parts: descriptive information and reflective information. As a result, there were guiding topics to write (See Appendix O for Researcher's Field Notes). The participants were addressed anonymously in the field notes to protect their confidentiality following the research ethics.

3.4.3.6 The Students' Diaries

Students' diaries served as a reflection on their cognition and affection during the DA intervention. The data enriched the understanding of students' learning experiences from DA and their feelings toward it. Furthermore, students wrote it after each DA session making the data reveal the ongoing changes throughout the intervention, which added more perspectives to each DA task. Diaries were chosen because they allowed students to express their very personal or intimate information that they may not reveal in face-to-face communication (Willig, 2013). Thus, they benefited students to voice and interpret their learning experiences in an unintrusive way. To make diaries effective tools, the researcher should provide some guidance on what to write otherwise the data might be cumbersome or diffused the focus of the intervention (Bailey, 1991; Willig, 2013). Moreover, the researcher should collect diary entries regularly and motivate the participants to continue writing them. In this study, the researcher provided guiding questions for them to write. The participants were asked to note down each session's academic vocabulary as a wrap-up. Then they were asked to reflect on the VLS, the learning through group dynamic assessment (GDA), and their feelings while learning. The researcher collected their diaries daily

after each DA session to prevent students' memories to mix up. Later, their diaries were returned to them so that they can review the learned academic vocabulary (See Appendix P for Students' Diaries).

3.4.3.7 The Attitude Questionnaire

An attitude questionnaire was used to collect the data regarding the participants' attitudes toward the overall DA intervention. It provided a chance for them to reveal their attitudes privately without being affected by other people's influence such as an interview. To do so, the attitude questionnaire was administered after the immediate posttest but before the semi-structured interview protocol. The data were triangulated with the data from semi-structured interview and students' diaries to yield more reliable findings on the participants' attitudes. Given that a few previous studies employed group dynamic assessment (GDA) and did not investigate the students' attitudes, the researcher had to devise a new questionnaire based on existing attitude questionnaires of relevant topics: dynamic assessment by Siwathaworn (2018), vocabulary learning by Mahmoudi, Samad, and Razak (2012), and cooperative learning by McLeish (2009). The questionnaire consisted of ten statements on a four-point Likert scale and an open-ended part for additional comments. A Likert scale was used because it had a range to capture different levels of intensity of feelings (Burns & Bush, 2008); as a result, the format was considered suitable for investigating the participants' attitudes. The four-point Likert scale was used instead of an original five-point Likert scale to encourage the participants to take a position to agree or disagree with the statements without an indecisive position. It was hoped that the specific responses provided a sharper focus to the research. The four choices were: strongly disagree (1 point), disagree (2 points), agree (3 points),

and strongly agree (4 points).

The questionnaire was written in English and Thai to facilitate the participants' understanding of the questions. The mean score of each questionnaire item was calculated. In terms of a score interpretation, the study followed Siwathaworn (2018) by setting an equal score interval for a straightforward interpretation as follows:

a) Mean = 3.26-4.00 was interpreted as a high degree.

b) Mean = 2.51-3.25 was interpreted as a moderately high degree.

c) Mean = 1.76-2.50 was interpreted as a moderately low degree.

d) Mean = 1.00-1.75 was interpreted as a low degree.

(See Appendix Q for Attitude Questionnaire).

3.4.3.8 The Semi-structured Interview Protocol

The semi-structured interview protocol was a set of open-ended questions to elicit data regarding the participants' learning and attitudes toward the overall DA intervention. A group interview was administered after the participants completed the attitude questionnaire. The semi-structured interview protocol was chosen because it allowed the researcher to probe more information related to the answers that the participants originally provided. However, Willig (2013) cautioned that the participants' words may not simply and directly reflect their thoughts and feelings. Thus, the interview data were triangulated with the other data collection instruments. In this study, adapted from Siwathaworn (2018), there were eight questions targeting cognitive to affective aspects, asking whether the participants had taken dynamic assessment before, what they did in GDA, what they gained from GDA, what feedback they thought was useful and not useful, how they thought of DA compared

to other vocabulary learning techniques that they had learned, their feelings toward GDA and individualized DA, and their suggestions for improving DA (See Appendix S for Semi-structured Interview Protocol). The researcher notified the participants of the timeframe of the interview and asked for their agreement. Their identities were protected according to the research ethics. The interview was recorded and transcribed for the contents but not linguistic features of speech such as volume, false starts, and pauses because the focus was to understand the contents irrespective of how they were presented.

3.4.3.9 Validation of Data Collection Instruments

The data collection instruments that needed validation included the demographic characteristics questionnaire, pretest, immediate posttest, delayed posttest (the same as pretest), verbal reports, field notes, students' diaries, attitude questionnaire, and semi-structured interview protocol. Three experts in the fields of English language assessment and English language instruction validated the data collection instruments using an Item-Objective Congruence (IOC) index for content validity. However, the pretest and immediate posttest were validated by the experts who validated the screening instruments since they were all about tests. The criteria for judging and interpreting the results were the same as those of the screening instruments and research instruments. The average score below < 0.5 indicated that the content had to be revised following the experts' suggestions, or a justification had to be provided to keep the content intact.

The results of the expert validation made the researcher revise the language and response format of some items in the demographic characteristics questionnaire, students' diaries, attitude questionnaire, and semi-structured interview. For example, a

question that asked two topics was separated into two questions, and a negative question with 'not' was removed. One expert reminded the researcher to ask more specific questions and give examples to help the participants retrieve information more easily while doing the semi-structured interview protocol. The format of the field note was also revised to make it more applicable to manage qualitative data. One expert suggested that each topic should be more specific and provide more guided principles or questions to get in-depth information. However, the researcher maintained the original topics as the research adopted an inductive approach which enabled the researcher to let the data emerge naturally and then analyze the tentative phenomenon so that the overall learning experience was captured. In addition, there were guided questions about DA in the critical reflection part that helped the researcher see things through a DA lens.

According to the validation results of the pretest and the immediate posttest, the researcher added a sample item at the beginning of each part of the test to facilitate the understanding of the directions. Some constructs were deleted as the experts thought they were not assessed by the test. In the directions of the morphology part, technical terms including the "root" and "affixes" were explained with the words "base" and "prefixes and/or suffixes" for test takers to understand, and the word "affix(es)" appeared in the response to let test takers know that there may be more than one affix to fill in. The name of the "collocation part" was changed to the "part of speech part" to match the vocabulary learning strategy–analyzing part of speech. In the guessing meaning from context part, the language in an item of the guessing meaning from context part was rearranged. In the sentence writing part, a guiding grammatical pattern was provided to eliminate the problem of lacking the

knowledge of a sentence structure that could interfere with the knowledge of the word's grammatical function. The meanings of some Thai words were changed to make them more closely match the English definition. Lastly, the part's name was changed to the sentence writing and translation part as the test takers must write Thai translations so that the researcher knew their intended meaning of the English sentence.

3.5 Instructional Framework (CALLA)

The instructional framework was used when administering group dynamic assessment (GDA). In this study, the Cognitive Academic Language Learning Approach (CALLA) was the instructional framework that linked vocabulary learning strategies and dynamic assessment (DA) tasks together in the DA model. Given that the five-stage instructional sequence of CALLA (preparation, presentation, practice, self-evaluation, and expansion) was flexible (Chamot & O'Malley, 1996; Gu, 2018), the stages were arranged in a sequence suitable for teaching VLS through DA tasks in this study. As a result, the five-stage instructional sequence was covered in two sessions, and some stages re-occurred as shown in Figure 3.1.
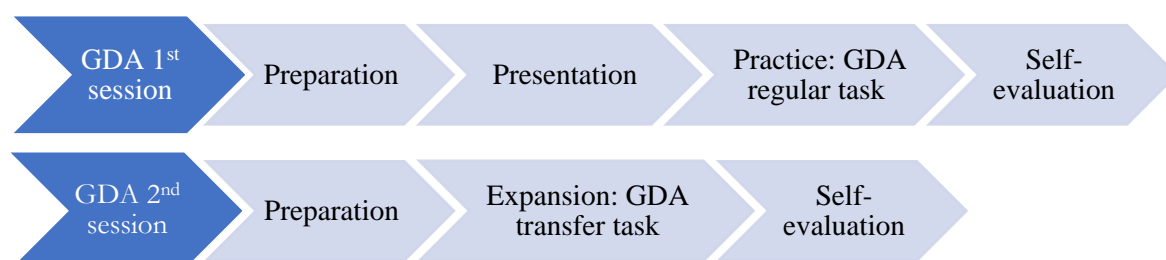
Figure 4 Instructional Sequence of the DA Model

The first session included the stages: preparation, presentation, practice, and self-evaluation. First, the teacher activated the participants' prior knowledge of a

particular VLS through the preparation stage and then the teacher presented linguistic knowledge necessary for employing the VLS and modeled how to use the VLS to the participants in the presentation stage. It must be noted that the academic words used in this stage were excluded from the target words in DA tasks and the pretest and posttests. Next, the participants did a DA regular task with the teacher (mediator) in the practice stage. This stage was for group dynamic assessment (GDA) in which the teacher simultaneously assessed the group's ZPD and mediated the participants to internalize the concept of VLS to learn academic vocabulary. When the participants could not answer the question after the DA most explicit prompt was given, the mediator explained the correct answer. Each participant in the group was to be equally active. The teacher (mediator) could switch turns between them to let them answer questions, help another participant answer the question, give comments, and ask questions. At the end of the first session, the self-evaluation stage was for the participants to reflect on the learned academic vocabulary, the VLS, the learning through GDA, and their attitudes toward the learning.

The second session included the three stages: preparation, expansion, and self-evaluation. The preparation stage was for activating the participants' previous learning in the first session, so they recalled the VLS, relevant linguistic knowledge, and the DA process. Then the expansion stage was for the participant to do a DA transfer task, which was more difficult than a regular task, with the teacher (mediator) through GDA. At the end of the second session, the participants reflected on their learning in the self-evaluation stage as they did in the first session (See Appendix K for Sample of Instructional Framework). After the GDA, the mediator did individualized DA with each participant, but the stages in the instructional framework were not repeated

because this was a practice to examine the gain from GDA at an individual level.

3.6 Data collection

Recruiting the participants with the screening instruments took place at the beginning of the first semester of the academic year 2022. The whole group of students who retook the first English foundation course in the summer semester took two vocabulary tests as the screening instruments, and five students who gained low scores were invited to be the participants. The first week of the research was devoted to giving the orientation of the research procedure for the selected students, asking for the students' consent to be the participants, administering the pretest, and introducing dynamic assessment. The orientation provided the information about the objectives of the research, the benefits expected from this research, the number of weeks and sessions for data collection, as well as the requirements that the participants did including answering the demographic characteristics questionnaire, taking the pretest, joining the group and individualized dynamic assessment, doing a verbal report, writing a diary, taking an immediate posttest, answering the attitude questionnaire, joining a group interview, and taking a delayed posttest. The participants received the information sheet describing necessary information that research participants needed to know following the research ethics. They knew that they were video- and audio-recorded but their personal information was kept confidential, and they received compensation for their time. After the students agreed to be the participants, they signed the informed consent form. The researcher arranged the schedule for the intervention with them at their convenience. Then the participants responded to the demographic characteristics questionnaire and did the pretest.

The first week was also for introducing dynamic assessment. First, the

researcher explained her role as the mediator to give minimal assistance as an implicit prompt to let the participants do the tasks by themselves first. If they still struggled, gradual assistance was provided until they received an explicit prompt to reach the answer. As a result, the research could assess their current ability (assess) and provide contingent assistance (teach) to move them to the proximal ability. When the participants did each item, the researcher directed prompts and questions to different members to help the other members in the group to participate equally. Then, the research explained the participants' role regarding interactionist DA that their interactions whether to speak or act were crucial to help the researcher know what assistance was needed and move the intervention forward. They could speak in Thai express their thoughts clearly so that the mediator could assess their understanding while doing the tasks. They could request the researcher to translate her English prompts, questions, and explanations in Thai if they did not understand. The language that the mediator used during the interaction was expected to be 50% English and 50% Thai. English was used to start the conversation; however, the mediator used Thai to assure the participants' comprehension.

The DA intervention covered four weeks. It was to be an intensive remedial tutoring outside the participants' regular class time. Thus, the researcher arranged the date and time for the DA intervention with the participants at their convenience. Each week was for each type of the four DA tasks: morphological analysis task, part of speech task, guessing meaning from context task, and sentence-writing task. The first three tasks targeted receptive knowledge and were placed before the fourth task targeting productive knowledge because receptive word learning was believed to be easier (Nation, 2011). The tasks started from the morpheme or the smallest unit of a

word, the parts of speech of a collocation, the word meaning in a short passage, and using a word in a sentence. As such, the participants' cognitive processing moved from controlled to more peripheral to suit the beginner's characteristics (Brown, 2001). In each week, the participants joined two group dynamic (GDA) sessions and one individualized DA session on separate days. To sum up, there were eight sessions for GDA and four sessions of individualized DA, so each student joined 12 DA sessions in total.

Since the DA intervention was treated as intensive tutoring, the sessions were relatively short. They were to support but not to overwhelm the participants because they also had to take their regular courses. Furthermore, Hunt and Beglar (2002) suggested in the principles of vocabulary teaching and learning that several short consecutive sections should be used for word learning rather than long sessions. Consequently, a GDA session lasted around one hour and 30 minutes. The individualized DA session lasted approximately 30 minutes. After the participants finished each item in the DA tasks, the researcher asked them to verbally report their thoughts. They described their cognitive processes and clarified any ambiguous speech or action while doing each item. All the DA sessions were video- and audio-recorded and transcribed later for data analysis as they provided evidence of the effects of dynamic assessment on English academic vocabulary knowledge. When they finished all the items of each task, they were given ten minutes to write a diary to reflect on what they learned and felt. Moreover, the diary required the participants to write the learned words and thus served as a review, which should occur immediately after the word was learned (Hunt & Beglar, 2002). The researcher wrote a field note soon after each session ended. The individualized DA was also video- and audio-

recorded followed by a verbal report and diary writing. In the sixth week, all the participants did the immediate posttest and answered the attitude questionnaire and the semi-structured interview protocol, respectively. Then, they did the delayed posttest in the eighth week which was two weeks after the immediate posttest. Although the time for the delayed posttest varied across studies, the present study followed Haynie (2003) who produced prolific studies on learning retention and mentioned that delayed retention tests were to be administered two or more weeks after the instruction or immediate testing. Table 11 summarizes the data collection.

Table 11 *Summary of data collection*

Week	Session	Procedure
		Recruitment of the participants
		• Recruiting five participants through vocabulary screening tests
1		***Orientation of Research Procedure & Pretest***
		• Explaining the objectives and procedures during the intervention of how to do GDA, individualized DA, verbal report, and diary.
		• Asking for the participants' informed consent and arranging a schedule with them.
		• The participants answered the demographic questionnaire.
		• The participants took the pretest
		• Introducing dynamic assessment
2	1	GDA Session 1 (Regular Task) of **Morphological Analysis Task**
		• The sessions were video- and audio-recorded.

		• The verbal report was done after each item and was video and audio recorded.
		• The participants wrote a diary right after the GDA session.
	2	GDA Session 2 (Transfer Task) & Repeat the steps as GDA session 1
	3	Individualized DA (Regular and Transfer Tasks) & Repeat the steps as in GDA session 1
3	1	GDA Session 1 (Regular Task) of **Part of Speech Task**
	2	GDA Session 2 (Transfer Task)
	3	Individualized DA (Regular and Transfer Tasks)
4	1	GDA Session 1 (Regular Task) of **Guessing from Context Task**
	2	GDA Session 2 (Transfer Task)
	3	Individualized DA (Regular Task and Transfer Tasks)
5	1	GDA Session 1 (Transfer Task) of **Sentence Writing Task**
	2	GDA Session 2 (Transfer Task)
	3	Individualized DA (Regular Task and Transfer Tasks)
6		Immediate Posttest, Attitude Questionnaire, Semi-structured Interview
8		Delayed Posttest

3.7 Data analysis

To answer Research Question 1 focusing on the academic vocabulary enhancement by DA, quantitative data from the pretest, immediate posttest, and delayed posttest were triangulated with qualitative data from the recordings of DA sessions, the participants' verbal reports and diaries, and the researcher's field notes. Thematic analysis was the main data analysis for the qualitative data to identify meaning units or themes because it allowed flexibility for data coding without pre-established coding frames (Braun & Clarke, 2006). Since there were four kinds of DA

tasks and each task was administered in different weeks, the data of each week were analyzed separately. The analysis focused on the participants' cognitive processes, particularly the underlying learning difficulty and conceptual errors elicited from tasks and the role of mediation in interactionist DA to resolve them. However, it was unlikely that all dialogic mediation happened in perfect order from implicit to explicit assistance when DA was implemented in real-life interaction, but the researcher tried to gradually guide to help them regulate their learning as much as possible. If there were occasions where graduated guidance did not apply but other means such as direct feedback and explanation were employed, the researcher described them as well.

Regarding Research Question 2 on the learners' attitudes toward the use of the DA model on academic vocabulary knowledge, to answer this question, the data from the attitude questionnaire, semi-structured interview protocol, and the participants' diaries were triangulated. Descriptive statistics were used to analyze the numerical data from the close-ended questions in the attitude questionnaire. Thematic analysis was used to analyze the data from the semi-structured interview protocol, students' diaries, and the open-ended questions in the attitude questionnaire. Table 12 summarizes data analysis according to the research questions and instruments.

Table 12 *Summary of data analysis*

Research Questions	Instruments	Purpose	Data Analysis
1. What are the effects of dynamic assessment model on low proficiency students' English academic vocabulary knowledge?	Demographic Questionnaire	Give Ss' background	Raw score
	Pretest, Immediate Posttest, Delayed Posttest	Give Ss' solo performance as evidence of improvement after the intervention to supplement the qualitative data	
	Recordings of DA sessions, Verbal report, Researcher's field notes,	Record evidence of learning in DA tasks Ask Ss to clarify thoughts behind answers Summarize important events in each DA session and reflect on them.	Thematic analysis
	Students' diaries	Ask Ss to summarize learned words and reflect on their learning in each DA session	

Research Questions	Instruments	Purpose	Data Analysis
2. What are students' attitudes toward the use of dynamic assessment model on English academic vocabulary knowledge?	Attitude questionnaire	Privately elicit Ss' attitudes toward overall intervention	Descriptive statistics
	Semi-structured interview	Elicit Ss' attitudes in group interview and ask for elaborated answers	Thematic analysis
	Students' diaries	Elicit Ss' reflection on their feelings in each DA session	

CHAPTER IV

RESULTS

This chapter presents the results of the present study which aimed at investigating the effects of dynamic assessment on low proficiency students' English vocabular knowledge and their attitudes toward the dynamic assessment model.

4.1 Effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge

The study findings of the quantitative data revealed that the participants' test scores did not clearly indicate the improvement in vocabulary knowledge. They only showed fluctuations in the participants' raw scores as evidenced in Table 13 below. Besides, statistical analysis could not be done because there were only five participants. However, the findings of the quantitative data were still considered meaningful as they reflected the changes in the participants' vocabulary knowledge after the DA model was implemented in this study. Table 13 shows the participants' pretest, immediate posttest, and delayed posttest scores.

Table 13 *The participants' pretest, immediate posttest, and delayed posttest scores*

Test/Name	Pretest	Immediate Posttest	Delayed Posttest	Total Score
Jee	11.5	20	14	32
Smile	11	13	8.5	32
Pukpik	7	10.5	10	32
Leejen	5	8	9	32
Koko	4	7.5	7	32

The test scores of all five participants varied, and they were quite low compared to the total scores. The pretest scores revealed that each participant had varying levels of English background knowledge. The immediate posttest scores showed that Jee's score increased the most by 8.5 points, while the other participants gained 2 to 3.5 points after the pretest Moreover, the immediate posttest and delayed posttest scores of Pukpik, Leejen, and Koko, who earned lower pretest scores, were relatively equal. In contrast, those of Jee and Smile showed a sharp decrease. Subsequent investigation revealed that Smile's delayed posttest score was lower than the pretest score. It was found out later that it was because she got the correct answers during the pretest of the guessing meaning from context section by chance. Moreover, when the scores of each section were analyzed separately, it could be seen that the immediate posttest scores of the morphology, the part of speech, and the sentence writing sections were slightly higher than the pretest scores. Then, they either dropped, remained stable, or increased in the delayed posttest. Furthermore, the raw scores of the guessing meaning from context section were the lowest. This implied the DA intervention might not have had any effects on the participants' reading and guessing word meaning.

In addition, the participants' overall performance in the four DA tasks when developing vocabulary knowledge were explored and the findings are as follows.

- The mediation stages

The mediation stages of each task were different and arranged from the most implicit to the most explicit levels. If the participants could answer correctly with implicit mediation provided, it would mean that they had internalized the concept taught and been able to regulate their learning. However, the participants'

performance while doing DA tasks revealed that implicit mediation was enough to help them complete the morphology task and the part of speech task. These two tasks had a narrower focus on the word level. In contrast, explicit mediation, which explained and provided a correct form or sentence structure, was needed to help the participants complete the guessing meaning from context task and the sentence writing task. These two tasks had a broader focus on the passage and sentence levels. The employed mediation stages implied that the participants could regulate their learning at the word level but not the passage and sentence levels.

- Vocabulary constructs

In this study, each task consisted of a few vocabulary constructs for the participants to achieve with the mediator's help. The amount of help determined by the level of mediation provided and the verbal report during which the participants were asked to clarify their reasoning revealed that the participants achieved only some constructs in each task but not all. The construct of form and meaning was achieved in all the tasks. However, the constructs of grammatical functions, collocations, and concept and referents were hardly achieved. It was because only explicit mediation could help the participants achieve these constructs, and the verbal report revealed their use of inappropriate strategies rather than their true understanding.

- Other forms of assistance to supplement DA

When using DA with low proficiency students, the findings showed that giving mediation prompts was not enough to help them complete the tasks. The mediator had to help them read a contextual sentence and short passages, teach them to use a dictionary, and explain grammar, words, spelling, and pronunciation. Assistance was in the form of a mixture of giving contingent and graduated mediation

and direct feedback. This was because the mediator tried to make the problem-solving congruent to DA by gradually guiding the participants to solve them on their own as much as possible. However, when there were a lot of problems, direct feedback was used to save time and to reduce the participants' overloaded cognitive processing so they could focus on important ones for the tasks. Other important tools included dictionaries and class materials because the participants needed to look up the word meaning, part of speech, and use class materials to refer to what had been taught.

- Interaction with low proficiency students in DA

In this study, the interaction in DA was aimed to stimulate the participants to do the tasks by themselves as much as possible by gradually giving assistance from the implicit to the explicit levels. Although the interaction did not make the participants achieve all the vocabulary constructs, it exposed many problems that low proficiency students had. Therefore, subsequent intervention could be made to solve the problems. When DA was implemented in this study, it could be seen that low proficiency students took a long time to answer, and sometimes the mediator must stimulate them. The mediator also needed more patience and effort to deal with their deficit in English language ability.

- Unequal learning gain from GDA

The study findings helped confirm that group dynamic assessment could be administered but each participant learned unequally in the group as found in individualized DA. Therefore, despite the seemingly united group's ZPD, an individual ZPD was still different. Moreover, there were different advantages of GDA and individualized DA. Low proficiency students liked to study with peers in GDA,

but they were more confident to ask questions more in individualized DA. In addition, the individualized DA helped the mediator discover their problems more.

Moreover, the vocabulary knowledge was reflected in the participants' performance in each task, and such evidence contributed to the main findings of the study. Since the participants' performance was specific to each task because of the different constructs and task formats, the findings were analyzed by tasks and are presented as such.

A. Morphology Task

Dynamic assessment (DA) in the morphology task assessed and taught the participants the knowledge of root, affix, and meaning of the derivative as well as the concept implied by contextual sentences. The vocabulary constructs included word parts, form and meaning, and concept and referents based on Nation's (2011) constructs of vocabulary knowledge of form, meaning, and use areas. They are referred to as receptive skills in this task.

A.1) GDA – Regular Task (Morphology Task)

The regular task contained eight items of transparent derivatives whose roots had no change in sound or spelling when combined with the affixes. In the beginning, the participants did not initiate discussion or answer anything; therefore, mediation stage 1 with no feedback given from the mediator was automatically waived. Instead, the mediator had to stimulate the discussion by asking them questions, helping them read the contextual sentences, and letting them search for the meaning of the unknown words. When analyzing the transparent derivatives, the participants knew the number of word parts (mediation stage 2). They were able to separate the roots and affixes of five out of eight words correctly (mediation stage 3). The part where they fully

struggled was to tell the meaning and part of speech of the roots and affixes (mediation stage 4). Thus, the mediator allowed them to use dictionaries and the class materials, which was the list of prefixes and suffixes to find the answers. The data from the researcher's field notes and the students' diaries were congruent in that the participants did not know the meanings of many words nor did the part of speech; thus, they needed a dictionary to help. Furthermore, although the derivatives were transparent, they sometimes misunderstood the affixes such as "cal" for "critical" and "re" for "restriction." Excerpt 1 shows the example that reflects the participants' ability to tell the root and affix correctly.

Excerpt 1: GDA - Regular Task (Morphology Task)

Item 5. At a time of economic **uncertainty**, risk-taking can seem difficult.

1. M: Number 5. At the time of economic uncertainty, risk-taking can seem difficult. Economic - do you know the word "economic"?

2. Ss: *(9 seconds of silence)*

3. M: พอมีใครรู้ไหมคะ คำว่า economic?   'Does anyone know the word economic?'

4. Leejen: (ค้นคำ) เกี่ยวกับเศรษฐกิจ   '*(searches the word)* It's about economy.'

5. M: เกี่ยวกับเศรษฐกิจนะคะ   risk-taking risk แปลว่าความเสี่ยง ถ้ามันมี uncertainty เกี่ยวกับเศรษฐกิจ การ

    ทำสิ่งต่างๆที่มีความเสี่ยงจะเป็นเรื่องยาก

    'It's about economy. Risk-taking – risk means the possibility of harm. If there is uncertainty in the economy, taking risk is difficult.'

6. M: And we will look at the word "uncertainty." How many parts do you think there are? *(mediation stage 2)*

7. Jee: สาม   'Three'

8. M: What do you think? *(mediation stage 3)*

9. Jee: un, certain, ty

10. M: OK, good. What does it mean – "certain"? *(mediation stage 4)*

11. Ss: *(search the meaning of certain)*

12. Leejen: แน่นอน   'Sure'

13. M: เป็นคำประเภทไหนคะ?   'What part of speech is it?'

14. Leejen: *(looks at the tablet before answering)* adjective

15. M: When we add prefix "un," un means?

16. Ss: *(7 seconds of silence)*

17. M: กลับไปดูชีท prefix นิดนึงนะคะ *(เปิดชีทตาราง prefix ให้ดู)* "un" means not เราได้คำว่าไม่แน่นอนมาแล้ว

แล้วเราก็เห็น suffix "ty" suffix "ty" ทำให้คำๆนึงกลายเป็น? ในตารางมีไหมคะ? No, but we see

something similar "ity" so this should form a..?

'Please look at the prefix sheet *(opens the list of prefixes)* "un" means not – we

got the word "uncertain," and we see the suffix "ty" which changes the part of

speech into? Is suffix "ty" in the list of suffixes? No, but we see something

similar "ity" so this should form a..?'

18. Smile: noun

19. M: ดังนั้นในช่วงเวลาที่มีความไม่แน่นอนทางเศรษฐกิจ การทำสิ่งที่มีความเสี่ยงก็ดูเหมือนจะยาก

      'Therefore, during the time of economic uncertainty, risk-taking seems

difficult.'

      As seen in Excerpt 1, the participants could tell the word parts of "uncertainty"

in turn 9, but they did not know the meaning and part of speech of the root "certain"

in turn 11, no did they know the meaning of the prefix "un" and the part of speech of the suffix "ty." They needed to rely on a dictionary and the lists of prefixes and suffixes. When they struggled with silence in turn 16, the mediator guided them in turn 17 to refer to class materials to find the answers. Thus, assistance was offered only when needed according to the interactionist DA.

A.2) GDA – Transfer Task (Morphology Task)

In the transfer task, the derivatives contained orthographic and/or phonological changes of the roots and were considered more difficult. The mediator still had to help read the contextual sentence and stimulate the participants to talk because they did not start discussing the sentence meaning. The participants took 30 minutes longer time to answer. The participants could tell the number of word parts (mediation stage 2), but were able to separate the roots and affixes of only three out of eight words, all of which had small orthographic changes (mediation stage 3). As for the other five words, they could tell the affixes but not the roots, so this was where they fully struggled. When they searched for the roots with their mobile phones, they took a long time but could not find them. As a result, the mediator helped them by introducing Longman Dictionary which showed the word family that contained the root. However, sometimes the participants could not locate the root in the word family. Moreover, they needed a dictionary to know the meaning and part of speech of all of the target academic words (mediation stage 4). Lastly, some of them avoided pronouncing the words because they did not know how to pronounce them.

The students' diaries agreed with the researcher's field notes that finding the roots was challenging for them because they knew little vocabulary such as thinking that "evit" was the root of "inevitably." Another case was that they chose the root

from a familiar word, but it was wrong such as "product" for "reproduction." Moreover, the diary implied that a participant's zone of proximal development (ZPD) might not have reached the group's ZPD. Although the correct answer was provided in GDA that "vary" was the root of "variation," Koko wrote in his diary that "varia" was the root and questioned why "varia" was not a noun like the suffix "tion." Apparently, he did not get the answer "vary" nor understand the concept of suffix, which changed the part of speech. This indicated that although all participants in GDA seemed to understand the correct answers, there could be someone lagging behind. Excerpt 2 illustrates an example where the participants could not select the root although the word family was shown.

Except 2: GDA - Transfer Task (Morphology Task)

Item 3. The survey found a wide **variation** in the prices charged for canteen food.

1. M: Number 3. The survey found a wide variation in the prices charged for canteen food. Survey พบ variation ที่มันกว้างมากของ prices prices คืออะไรคะ? price เมื่อเราซื้อของเราถาม price 'Survey found a variation of prices that is wide. What are "prices"? Price – when we buy things, we ask the price.'

2. Ss: ราคา   'price'

3. M: ราคาสำหรับซื้ออาหารในโรงอาหาร เพราะฉะนั้นการสำรวจเนี้ยมันเจอราคาค่าอาหารในโรงอาหารที่มี a wide variation เราจะมาดู variation กันนะคะ wide แปลว่ากว้าง

'The price of food in the canteen – the survey found the prices that had a wide variation. We will focus on variation. Wide means broad.'

So, I'd like you to discuss how many parts are there in variation? *(mediation stage 2)*

4. Ss: *(20 seconds of silence: look at the class material and open it)*

5. M: Coco คิดว่ามีกี่ส่วนคะ?   'How many parts do you think Koko?'

6. Koko: มีสองส่วน   'two parts'

7. M: Can you locate the suffix, Smile? บอก suffix ได้ไหมคะ

        'Can you tell the me the suffix?' *(mediation stage 3)*

8. Smile: tion ค่ะ   'tion'

9. M: Yes. And now you must find the root of "variation." You can use a dictionary.

10. Ss: *(searched the root for 25 seconds)*

11. M: I'd like you to go back to Longman Dictionary.

(types "variation" in Longman Dictionary) Ok now you can see this is called a word family. Word family แปลว่ากลุ่มคำที่อยู่ในครอบครัวเดียวกัน root มักจะเป็นคำที่เป็น basic spelling

Root

ของมันคือคำไหนดีคะ? เป็นตัวสะกดที่ simple พื้นฐานที่สุด

        'Word family means a group of words in the same family. The root often has a basic spelling. Which word is the root - the simplest spelling?'

12. Ss: *(15 seconds of silence: try to choose the root)*

13. Leejen: ที่มี nt อยู่ข้างหลัง   'the one with "nt" at the end'

14. M: คำไหนเอ่ย   'Which one?'

15. Leejen: คำที่สาม *(เลือก variant)*   'the third one' *(chooses variant)*

16. M: คำนั้นยากไป มีคำที่ง่ายกว่านั้น มีคำที่ basic กว่านั้น

        'That word is too complex. There is a simpler word – more basic.'

17. Pukpik: ed หรือเปล่าคะ *(เลือก varied)*   'Is it ed?' *(chooses varied)*

18. M: อันนี้ยังไม่ basic เท่าไหร่   'This one is not that basic.'

19. Jee: คำก่อนนั้น *(เลือก variance)*   'The word before that' *(chooses variance)*

20. M: คำที่สองเหรอคะ No   'The second word? No'

21. Smile: v-a-r-y

22. M: ใช่ แค่นี้เลยค่ะ เวลาเราดู root ส่วนใหญ่เป็นคำที่ง่ายและตัวสะกดน้อย มันจะไม่มี able, ance, ence, ity, tion, อะไร พวกนี้อยู่

> 'Yes, only that. When we look for the root, mostly it is an easy word with simple spelling. It doesn't have able, ance, ence, ity, tion, whatsoever.'
> So, the root is "vary." And what does it mean "vary"? Now you can tell the meaning and the part of speech. *(mediation stage 4)*

As shown in Excerpt 2, silence prevailed in the transfer task. The mediator asked the participants to use a reliable dictionary to find the root in turn 11, because the long silence implied that they seemed unable to find it by themselves (turn 10). Choosing the root of the word "variation" was too far from their ZPDs as their answers much digressed from the correct one (turns 13-20). After Smile answered correctly in turn 21, the mediator reminded them that the root did not contain any suffixes. Later, the participants searched the meaning and part of speech of the root "vary," and answered correctly. To summarize, the participants could not tell the root of a derivative whose form greatly differed from its root, and they sometimes could not identify the base even after they had seen all the word forms.

A.3) Individualized DA (Morphology Task)

In the individualized DA, the mediator had each participant work on three items to determine the learning gain from GDA at an individual level. The items

included one transparent derivative and two complex derivatives with orthographic and phonological changes of the root. Regarding the transparent derivative with the word "corresponding," three participants could identify the root and affix correctly by merely separating the affix "ing." The other two misunderstood that "co" was the prefix, so the mediator guided them with mediation stage 2 with the number of word parts (according to the root "correspond" in the Academic Word List), and they located the root correctly. Regarding the complex derivatives with the words "exclusion" and "notably," most of them could identify the affix "sion" and "ly" but could not identify the root (mediation stage 3: identifying the root and affix), and had to use dictionaries and class materials to find the root, the word's meaning and part of speech (mediation stage 4: identifying the meaning and part of speech). The session recordings, verbal report, researcher's field notes, and students' diaries were triangulated and yielded the results of each participant as follows.

- **Jee**   Jee first misunderstood that "co" was the prefix of "corresponding" and thought that "notab" was the root of "notably." She used a dictionary quite effectively and found the root "notable" in an English-Thai dictionary that she was familiar with. When she could not find the root of "exclusion," the mediator suggested she use an English-English dictionary, and she was happy knowing this tool. Jee also read the contextual sentences the best among the group. She needed only minimal guidance to complete the task.

- **Smile**   Smile first thought that "co" was a prefix in "corresponding," but also suspected that her answer was wrong because of the leftover ill-formed "rresponding." For the words "exclusion" and "notably," Smile

decided to use a dictionary right away, but she was unfamiliar with it because she normally used Google Translation, so the mediator had to teach her to use a dictionary properly. In addition, Smile could not read a sentence. She exercised too much of her background knowledge which misled her. Direct feedback was often used with her because of numerous problems with grammar, sentence structure, and word meaning.

- **Pukpik**   Pukpik had a sense of word form. She separated "corresponding" correctly because she thought that "co" could not be the root as it would leave the ill-formed "rresponding." She first thought that the root of "notably" was "notab" but later changed to "notable" without using any tools as she said she must have heard it before. Furthermore, she suspected that there must be another letter to add after the letter "u" when the word "exclusion" was divided. However, she had a problem with reading a sentence and normally used a translation tool because she did not know any reliable dictionaries. Therefore, the mediator had to teach her how to use a dictionary properly.

- **Leejen**   Leejen merely separated all the words into halves which resulted in a correct separation of "correspond"+"ing" but wrong in the cases of "notab"+"ly" and "conclu"+"sion." Moreover, she had difficulty reading a sentence because she did not know many words and was confused with words with similar sound such as "angry" and "hungry." She admitted that she normally used a translation tool, not a dictionary, so the mediator had her use dictionaries along with guidance.

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- **Koko** Koko did the same thing as Leejen by merely separating words into "correspond"+"ing," "notab"+"ly," and "conclu"+"sion," which resulted in both right and wrong answers. However, he showed misconception of the affix as he thought "s" and "ion" were the affixes of "exclusion." Teaching Koko made the mediator know he needed help the most as he could not read a sentence at all and rushed to finish studying without being serious about it. For example, when he noted the learned words in his diary in GDA, he wrote "associa" and "evita" instead of "association" and "evitable." He normally searched a word's meaning by typing such word in Google followed by "แปลว่า" (means). When he was asked to use an online dictionary, he often rushed and misspelled words in the search box which made no result shown. With a lot of problems in his learning and understanding, direct explanation was used mostly.

Excerpt 3 shows an example of individualized DA. Assistance was given to help Leejen choose a meaning from a dictionary and find the root.

Excerpt 3: Individualized DA - Leejen (Morphology Task)

Item 2. Her writing ability has **notably** improved over the past year. It is very good.

1. M: ตอนนี้หาคำว่าอะไรเอ่ย?   'What word are you looking up?'

2. Leejen: ability *(searches the meaning)* ความสามารถ 'skill or capacity'

3. M: หาคำอะไรต่อคะ   'What word are you looking up next?'

4. Leejen: คำนี้ค่ะ *(ชี้ที่ writing)*   'This word' *(points at "writing")*

5. M: writing *(repeats to ensure the word)*

6. Leejen: ตัวหนังสือ   'Letter'

7. M: ความสามารถตัวหนังสือมันจะเข้ากันไหม เราจะแปลว่าไงดี เวลาเรา write เราทำอะไรคะ

       'the letter ability – do they match? How should we translate it? What do we

       do when we write?'

8: Leejen: เขียน   'Write'

9: M: ดังนั้นมันควรจะเป็นความสามารถทางการ..   'So, it is ability in….?"

10. Leejen: เขียน   'Writing'

[skips turns 11-18]

19. M: เพราะฉะนั้น notably จะเป็นตัวที่มาบอกว่ามันดีขึ้นยังไง บอก affix กับ root อาจารย์ได้เลยค่ะ

       'Therefore, notably will tell how her writing ability has improved. You can tell

       me the affix and root.' *(mediation stage 3)*

20. Leejen: เป็น ly รึเปล่าคะ   'Is it ly?'

21. M: ถูกต้องค่ะ   'Correct'

22. Leejen: *(เขียน notab ว่าเป็น root)*   *'(Write notab for the root)'*

23. M: เหมือน root ก็ยังไม่ใช่ อาจารย์อนุญาตให้ Leejen สามารถเสิร์ชหาได้ ยังไม่ใช่ notab

       'The root is still incorrect. I allow you to search for it. It is not "notab."

24. Leejen: *(เสิร์ชในดิคชันนารี Longman แต่คำนี้ไม่มี word family ให้ดู)* มันไม่มีบอก

       (searches in Longman Dictionary but not word family appears) 'it does not tell.'

25. M: อาจารย์จะให้เครื่องมืออีกอันนึง ลองใช้ thefreedictionary.com มีเป็นแอพด้วย ลองพิมพ์ notably ลงไปซิ

       บางครั้ง Longman บอกบางคำ *(หมายถึง word family)* แล้วก็ไม่บอกบางคำ เราต้องมีเครื่องมืออื่นในการ

       ซัพพอร์ท ตรงนี้ *(ดูใน thefreedictionary.com)* notably มันลิงค์กับคำว่าอะไรคะ?

       'I will give another tool. Try using thefreedictionary.com - it has an app too.

Try typing notably in it. Sometimes Longman Dictionary tells only some words but no other words *(refers to word families)*. We need other tools to support. Here, *(looks at the freedictionary.com)* what does notably link to?'

26. Leejen: nota *(tries to pronounce notable)*

27. M: notable *(recasts the pronunciation of notable)*

Individualized DA also revealed alarming learning problems including sentence reading, word search problems, lack of grammatical knowledge, and word confusion. Reading at a sentence level was a major problem that each participant had. They could not comprehend the contextual sentences. Although Jee, who could read the best among the group, still had a problem fully understanding the sentence. Consequently, the mediator had to help all of them read and resolve their misunderstanding considerably. The reading problem was magnified when it was combined with other problems such as word confusion and selection of wrong meaning from translation tools.

Another major problem was the participants' word search problems that needed guidance. The mediator noticed that most of them used translation tools to search for the word meaning and their understanding was misled. Moreover, they admitted that they used translation tools although they were informed by English lecturers that these tools could not always be trusted. Only one participant, Jee, whose performance was the best among the group, mentioned that she used reliable dictionaries. Consequently, the mediator introduced both English-Thai and English-English dictionaries for them to look up the meaning, forms, and part of speech and asked them to use them throughout the intervention.

The restrictive operating systems of the dictionaries also posed some difficulties for the lower-level learners so that the mediators had to assist them. For example, *Longman Dictionary* normally showed word families and was supportive of locating the root. However, it did not show word families of some words such as association, primarily, and notably. Consequently, the mediator had to introduce other online dictionaries including thefreedictionary.com and dictionary.com. The English-Thai dictionary, Longdo Dictionary, also had limitations in processing the inputted words. For instance, most participants were not aware that some verbs were inflected with the past participle "ed" due to their lack of grammatical knowledge. They searched with "ed" but the operating system did not show the result because it took only the non-inflected forms. The systems sometimes did not show the part of speech of some words either. Therefore, the mediator advised them use non-inflected forms or use an English-English dictionary instead.

Another issue related to the word search problem was the participants could not select the right meaning from the available results because some words had different parts of speech which resulted in multiple meanings shown. It could also be because they did not fully understand the contextual sentence. Lastly, lacking grammatical knowledge and word confusion with new words and existing words occurred throughout the intervention. The participants did not know basic grammar such as possessive pronoun, part of speech, and verb forms. In a natural conversation, the mediator unavoidably used different strategies to solve these problems including contingent and graduated mediation, direct feedback, recast, and dictionary search.

In summary, the participants, who had low proficiency of English, mostly could indicate the root and affix of most transparent derivatives. However, they were

less likely able to indicate the root of the derivatives whose roots had orthographic and/or phonological changes. Their knowledge of the prefixes and suffixes in terms of form, meaning, and part of speech was not sufficient. Dynamic assessment could pinpoint where they struggled and stretched their knowledge by using the mediator's guidance, reliable dictionaries, and class materials. However, reading the contextual sentence that signaled the concepts of the target words was difficult for them. The mediator also employed different kinds of assistance including direct feedback, explanation, and recast to help solve various problems that the participants had.

B. Part of Speech Task

In this task, dynamic assessment (DA) assessed the participants' developmental knowledge of the word meaning and part of speech to form collocations and taught them to learn academic vocabulary that appeared in a collocation form. The vocabulary constructs were the word form and meaning and the grammatical functions.

B.1) GDA – Regular Task (Part of Speech Task)

The part of speech task began with the mediator asking the participants about their understanding of the contextual sentence of each item because they did not initiate discussion. They had to use dictionaries to search the unknown words, and the mediator had to scaffold the sentence meaning for them. Therefore, stage 1 of mediation that let the participants read and answer by themselves was omitted. In the regular task, the word order of collocations was guided by the letters A and B, which was a word in group A fronted another word in group B. In the beginning, the mediator asked whether the participants knew the parts of speech of the choices, and they admitted that they did not. Knowing that the participants' answering by guessing

and deducting the wrong choices would become merely a test-taking strategy, the mediator divided them into two groups. The first group searched the parts of speech of the choices in group A, and the other group searched those of group B. They spent a lot of time finding the parts of speech of the choices. Later, they answered five out of seven items correctly on their first attempt. When they answered wrong, giving the mediation stage 2: existence of error and the mediation stage 3: location of error was enough to help them answer correctly.

However, their correct answers were based on the understanding of the collocation meaning or merely matching the collocation types including adjective-noun, verb-noun, adverb-adjective, and adverb-past participle; that is, when they knew a word's part of speech, they tended to match with another word correctly. They were rarely able to explain reasons related to the sentence structure. For instance, Leejen chose the word by comparing the meaning of two choices in Thai but not from the sentence structure, which resulted in the wrong answer. The students' diaries and the researcher's field notes added more perspectives on the participants' learning. The participants were aware of the four collocation types: adj-n, v-n, adv-adj, adv-past participle. However, they did not adequately understand the word's part of speech; for instance, Smile wrote in her diary that "comparable" was a verb. Furthermore, Leejen, Smile, and Pukpik wrote incomplete collocations in their diaries. In terms of peer interactions, instances of the participants' helping one another to move the group's ZPD were frequently observed. Excerpt 1 illustrates that the participants were able to give the correct answers in the first attempt.

Excerpt 1: GDA - Regular Task (Part of Speech Task)

Item 4. Some strategies are specific to a group of students, but more often than not,

the same strategy can be used to _(A)_____ _(B)_____

for everybody in a classroom.

A) enhance, enhancement, enhancing   B) learn, learner, learning

1. M: Some strategies..you are studying vocabulary strategies…strategy จะแปลว่าอะไรเอ่ย?

2. Leejen: *(ค้นความหมาย)* กลยุทธ์   '*(searches the meaning)* a plan of action'

3. M: ถูกต้องนะคะ กลยุทธ์บางอย่างมันก็ใช้ได้กับเฉพาะนักเรียนกลุ่มหนึ่ง a group of students but more

    often than not - more often than not แปลว่าบ่อยครั้ง เป็นวลี the same strategy กลยุทธ์

    เดียวกันเนี่ย can be used to สามารถที่จะใช้ *dot dot dot* เพื่อ everybody in the classroom

    แปลว่าอะไรเอ่ย?

    'Correct. Some strategies can be used for a group of students but more often

    than not.

    More often than not means quite often … it's a phrase - the same strategy can

    be used to *dot dot dot* for everybody in the classroom. What does it mean?

4. Jee: ทุกคนในห้องเรียน   'everybody in the classroom'

5. M: เพราะฉะนั้นกลยุทธ์เดียวกันก็น่าจะใช้เพื่ออะไรซักอย่างให้กับทุกคนในห้องเรียน

    'so the same strategty is likely used to do something for everybody in the

classroom'

6. M: กลุ่มนี้ enhance กลุ่มนั้น learn *(ให้น.ศ.หา part of speech ของกลุ่ม A และ B)*

    'this group searches enhance and the other group searches learn' *(asks the*

    participants to search the parts of speech of group's A and group B's choices)

7. Ss: *(search 38 seconds)*

[skips turns 8-21]

22. M: OK now let's come to the meaning. เลือกคำไหนดีคะกลุ่มเรา ตอนนี้ช่วยกันคิดนะคะ ช่วยกันแชร์

'Which word shoud we choose? Let's help each other think and share ideas.'

23. Ss: *(30 seconds of silence: look at the task sheet and online dictionaries on cell*

phones)

24. M: กลยุทธ์บางอย่างสามารถใช้เพื่อ..?　　　　　　'Some strategy can be used to..?'

25. Ss: *(10 seconds of silence)*

26. Koko: enhance

27. M: Yes we need a verb เพื่อเพิ่มพูนหรือเพื่อพัฒนา พัฒนาอะไร?

'enhance or improve what?'

28. Pukpik: learning

29. M: Yes พัฒนาการเรียนให้กับทุกคนในห้องเรียนได้ และนี่คือชนิดของ enhance คือ?

'Yes enhance learning for everybody in the classroom. What part of speech is

enhance?'

30. Koko: verb

31. M: plus?

32. Koko: noun

33. M: ทำไมKokoเลือกถูกคะ　　　　　　　　'Why did you choose the correct

answer?'

34. Koko: มันมี to *(ให้เหตุผลเพียงเท่านี้)*　　　　'It has to.' *(gave only this reason.)*

35. M: เคยได้ยิน infinitive with to ไหมคะ? เหมือนกับ to+v1 I'm happy to see you. I want to go.

I want to walk to the canteen. We need a verb. และพอเรามี verb เราจะมีคู่ของมัน เลือกเป็น

คำนามและความหมายว่าการเรียนรู้ ทันอาจารย์ไหมเอ่ย

'Have you ever heard "infinitive with to"?' It's like "to+v1" – I'm happy to

see you. I want to go. I want to walk to the canteen. We need a verb. When we have a

verb, we know its pair to form a collocation. We choose a noun meaning learning.

Can you follow me?'

36. Koko: learn อันนี้มี er   'learn - this one has er.'

37. M: learner?

38. Koko: มันเป็น n เหมือนกัน เป็น noun เหมือนกัน   'It's n too – it's noun too.'

39. M: ทำไมข้อนี้ Pukpik เลือกเป็น learning ไม่เป็น learner?

    'Why did Pukpik choose learning not learner?'

40. Pukpik: learner เหมือนจะบอกว่าเป็นนักศึกษา นักเรียน ถ้า learning เป็นการเรียน

    'Learner sounds like students but learning is the action of learning.'

41. M: เลือกเพราะความหมายใช่ไหมคะ   'Did you choose because of the

meaning?'

42. Pukpik: เลือกเพราะความหมาย   'I chose because of the meaning.'

43. M: และอีกอย่างนึงมันมี everybody แล้วค่ะ everybody หมายถึงคนแล้วเนอะ มันไม่น่าจะมี learner อีก

    น่าจะเป็นการเพิ่มทักษะการเรียนให้ทุกคน ไม่ใช่การเพิ่มพูนนักเรียนให้ทุกคน มันจะแปลก ทันอาจารย์ไหมเอ่ย

    One more thing – this sentence already has the word "everybody." Everybody

    refers to human so it should not be "learner." It should be enchancing learning

    for everyone not enhancing learner fore everyone. That would be odd. Can

    you follow me?

Excerpt 1 displays the participants choosing the correct answers of "enhance" and "learning" as can be seen in turns 26 and 28 that Koko and Pukpik gave. They knew the "verb-noun" collocation type although Koko could not explain clearly why he chose the word "enhance." After the mediator explained the grammar "infinitive" to support his answer, and the position of a noun after a verb in turn 35, Koko noticed that "learner" was also a noun and wondered why it was not the answer. The mediator asked Pukpik to explain and she differentiated the meaning between "learning" and "learner" in turn 40. The contribution of Pukpik helped Koko understand the reason and was considered a peer interaction that benefitted the group's ZPD. The mediator also confirmed the correct meaning from Pukpik in turn 43.

B.2) GDA – Transfer Task (Part of Speech Task)

The beginning of the transfer task was similar to that of the regular task since the participants did not start discussing anything. The mediator initiated the discussion by asking which word they did not know and allowed them to look up the meaning. The participants also needed help in choosing the right meaning from the dictionary and comprehending the sentences' meaning. In the transfer task, the choices were not organized in groups A and B to signal the collocation order, so it was more challenging, and the participants took 22 minutes longer than the regular task to complete. In addition, the mediator asked the participants to use their knowledge of suffixes to figure out the part of speech and only search the meaning and part of speech of the first word (the base) of each choice group. The participants answered two out of seven items correctly in their first attempt.

As for the other five items, the prompts were used the most in the mediation stage 2 (existence of error). The prompts in the mediation stage 3 (location of error),

stage 4 (nature of error), and stage 5 (explanation of how to correct error) were employed minimally. The verbal report revealed that the participant's correct answers mostly came from combining words to match the collocation types. Little evidence showed that they understood the sentence structure. The researcher's field notes and students' diaries revealed that the participants could not analyze the sentence to know which word was a subject, a verb, an object although they knew the basic sentence structure of S+V or S+V+O. For example, Pukpik wrote in her diary that she had a problem with the sentence structure and which word to put in. Also, Leejen wrote that she could not read to comprehend the sentence. She could only find the words' parts of speech. Except 2 illustrates an item that prompts from mediation stages 2 to 5 occurred when they gradually guided the participants.

Excerpt 2: GDA – Transfer Task (Part of Speech Task)

Item 2. The night market serves as both a cultural center and a place

for _____ among the city residents.

interact, interaction, interactive	social, society, socially

29. M: ลองนึกถึง collocation 4 กลุ่มนะคะ แล้วก็ดูว่าความหมายแบบไหนกับกลุ่มไหนที่มันจะเข้ากับบริบทของเรา

  'Think of the 4 types of collocations and consider the meaning and type that match with the context.'

30. Ss: *(1.40 minutes of silence: search with mobile phones, open the class materials)*

31. M: You can tell what you think บอกมาก่อน ถ้ามันไม่ใช่ อาจารย์ก็แค่บอกว่ามันไม่ใช่ แล้วอาจารย์ค่อยไกด์ บอกว่ามันต้องเป็นอะไร

  'You can tell what you think. Just tell first. If it is not, I will just tell you it is not and gradually guide you what it should be.'

32. Pukpik:คำแรกเป็น interaction ไหมคะ   'Is 1st word interaction?'

33. M: No *(mediation stage 2)*

34. Koko: interact

35. M: No *(mediation stage 2)*

36. Pukpik: interactive *(laughs)*

37. M: Remember, for this task you can switch words between groups

The group of interact is not in the first blank. คำในกลุ่ม interact ไม่อยู่ในช่องว่างแรกค่ะ

'The word in the group of interact is not in the first blank *(mediation stage 3)*'

38. Ss: *(23 seconds of silence)*

39. Leejen: คำที่สอง socially   '2nd word socially'

40. M: คำที่สอง หนูหมายถึงคำที่จะใส่ในช่องที่สองหรือเปล่าคะ

'2nd word – do you mean the word to put in 2nd blank?

41. Leejen: ใช่ค่ะ   'Yes'

42. M: No, as I said the word in the group of interact มันไม่ได้อยู่ในช่องแรกใช่ไหมคะ แสดงว่าช่องที่

สองเป็นที่อยู่ของคำใดคำหนึ่งในกลุ่ม interact และกลุ่ม social จะอยู่ในช่องว่างแรก

'No, as I said the word in the group of "interact" is not in 1st blank, so 2nd

blank is for it. *(mediation stage 4).* Then a word in the group of "social" will

be in 1st blank *(mediaton stage 5).*'

43. Ss: *(17 seconds of silence) (Leejen looked at Pukpik's class material.)*

44. Leejen: คำแรกเป็น social คำที่สองเป็น interaction

'1st word is social and 2nd word is interaction.'

45. M: Yes very good. How did you come up with the answer? Leejen ได้คำตอบมาได้ยังไงคะ?

'Leejen, how did you get the answer?'

46. Leejen: หันไปดูของเพื่อนแล้วเจอข้อ 1 ค่ะ

'Look at Pukpik's class material and saw item 1.'

47. M: เจอข้อ 1 คือยังไง?   'What is seeing at item 1?'

48. Leejen: เจอข้อ 1 คือเลือกเป็น adjective กับ noun *(ข้อ 1 สอนชนิด collocation: adj+n)*

'Seeing item 1 means I saw adjective and noun.' *(Item 1 teaches the*

collocation type: adj+n.)

49. M: ก็เลยสุ่มอันนี้ออกมา *(ขำ)* งั้นเดี๋ยวเราลองไม่ตอบด้วยการสุ่มซิแต่ตอบด้วยความหมายของประโยคที่ Leejen เข้าใจ

'So you randomly picked this one *(laughs).* Let's try answering not by

randomness but by the sentence meaning that Leejen understands.'

50. Leejen: *(8 seconds of silence)*

51. M: เราจะแปลความหมายประโยคนี้ว่ายังไงดีคะ   'How do we translate this

sentence?

52. Ss: *(5 seconds of silence)*

53. M: ตลาดตอนกลางคืน   'The night market'

54. Pukpik:ตลาดตอนกลางคืน   'The night market'

55. M: ทำหน้าที่เป็นทั้ง   'serves as both'

56. Pukpik:ทำหน้าที่เป็นทั้งศูนย์กลาง   'serves as both a cultural center'

57. M: ศูนย์กลางวัฒนธรรม   'a cultural center'

58. Pukpik:แล้วก็   'and'

59. M: และสถานที่สำหรับ   'a place for'

60. Pukpik:ผู้พักอาศัยในเมือง   'city residents'

61. M: เดี๋ยวก่อน สำหรับ social interaction จะแปลว่ายังไงดี

    'Wait..how will we translate social interaction?'

62. Leejen: ปฏิกิริยาทางสังคม เหรอคะ   'social reaction'

63. M: การปฏิสัมพันธ์ทางสังคมระหว่างผู้ที่พักอาศัยใน

    'social interaction among the residents in?'

64. Ss: เมือง   'the city'

65. M: ก็เป็นที่สังสรรน่ะแหละ เอาง่ายๆนะคะ เป็นที่ที่ให้เค้ามาปฏิสัมพันธ์กัน

'It is like a place for hanging out – simple like that. It is a place for them to interact.

In Excerpt 2, turns 32 to 35 revealed that the participants used a test-taking strategy by cutting the wrong choices rather than choosing the answer based on their actual knowledge. After they exploited all the choices: interaction, interact, and interactive, none was the first word of the collocation, and the mediation stage 2 was ineffective. The mediator used a prompt in the mediation stage 3 to indicate the location of error, but it did not help as seen in Leejen's attempt to answer in turns 39-41. In turn 42, the mediator had to explain the nature of error (mediation stage 4) that the word in the first group must be put in the second blank, and explain how to correct the error (mediation stage 5) by putting a word from the second group in the first blank. After that, Leejen answered correctly in turn 44, but she merely matched words according to the collocation type adj+n that she glanced on Pukpik's class material as seen in turns 46-48. She could not translate the sentence although she answered correctly as the silence in turn 50 showed. Her diary confirmed her performance today

as she wrote: "today I could match the parts of speech: n, v, adj, adv, past participle but I could not translate the sentence. The classmates helped translate it." This signaled that she did not know how the collocation functioned in the sentence.

B.3) Individualized DA (Part of Speech Task)

In the individualized DA, each participant did three items with the mediator; two of which resembled the regular task that the collocation order was guided by the letters A and B. They were "widely accepted" and "vital information." The other item resembled the transfer task the collocation order was not provided, and it was "readily accessible." Nonetheless, the difference in the format between items did not affect their performance in individualized DA. The participants needed help from the mediator in reading the contextual sentences and looking up the unknown words in the context. They used dictionaries to search the parts of speech of the choices although some participants, i.e. Jee, Pukpik, and Koko, could identify the parts of speech of some choices by themselves.

Also, the individualized DA revealed contrastive learning gain of each participant from the GDA. A major distinction among the participants was that only Jee, who earned the highest scores in the pretest and posttest, demonstrated an understanding of basic grammar in selecting the collocation. The others could match the words according to the collocation types but did not know the meaning of the word or sentence structure, and their reasoning did not validly support the answers. When they could not give the correct answers in their first attempt, the mediator gave only one time of mediation stage 2 (existence of error) or mediation stage 3 (location of error), and they could answer correctly. There was only one instance when mediation stage 4 (nature of error) was given simultaneously with mediation stage 2.

The data from the session recordings, verbal reports, researcher's field notes, and students' diaries were triangulated to shed more light on the participant's performance as follows.

- **Jee**   Jee answered two out three items correctly in the first attempt. When she did not get the right answer, giving the mediation stage 2 (existence of error) was enough for her to derive at the correct answer. Impressively, Jee remembered the four collocation types, so she did not have to look at the class material. She also knew the parts of speech of some choices without using a dictionary and could justify her answers using grammatical knowledge. When she could not find the part of speech of some choices in an English-Thai dictionary, she used an English-English dictionary (Longman Dictionary) effectively. Although she had a small problem with the word meaning, she responded to DA contingent and graduated prompts to solve it well. Her diary showed that she realized the value of forming collocations based on the part of speech which led to more understanding on the sentence structure.

- **Smile**   Smile searched all the choices of parts of speech. She answered two out of three items correctly in the first attempt. When she received the mediation stage 2 (existence of error), she could then correct her wrong answer. Unfortunately, she did not understand the grammatical function of the part of speech, the sentence structures that the collocation occurred, and even the word meaning. Smile answered by comparing the sentences in the task with those taught in the class materials and looking for words such as "is," "the," and "are" that appeared in both sources. For example,

she compared the task sentence "The restrooms and drinking water are

_____ _____ to people with disabilities." with a sentence in

the class materials "the staff at the resort are extremely (adv) helpful (adj)"

and saw the word "are" in front of the collocation, so she selected the

"adv-adj" type. She could not give any grammatical explanation. In her

diary, she stated she did not understand the sentence structure.

- **Pukpik**   Pukpik used a dictionary and the list of suffixes to help her

identify the part of speech of the choices. She answered two out of three

items correctly in the first time. Only the mediation stage 3 (location of

error) was given for the wrong answer, and she could correct it. However,

her answers came from guessing and matching the parts of speech to the

possible collocation type, because sometimes she did not know the word

meaning or sometimes she knew it but not the part of speech function and

the sentence structure. For instance, she chose "vital information"

correctly without knowing the meaning of "information." She

misunderstood that "accessible" modified "readily" in "readily accessible"

due to her Thai translation. Since the task format contained multiple

choices, Pukpik also used a test-taking strategy by cutting the words that

could not form any collocation types.

- **Leejen**   Leejen searched for the part of speech of all the choices. When

she could not find the part of speech of some words, the mediator asked

her to look at the lists of suffixes and guided her more. Unfortunately, her

answers of all three items were wrong the first time she tried, but the

mediation stage 2 (existence of error) given simultaneously with mediation

stage 4 (nature of error) was enough for her to choose the correct answer. Her wrong answers came from her illogical reasoning that the spelling of the first word of the collocation must be short, and that of the second word must be long without knowing the word meaning and sentence structure. Her diary showed that she could not read the sentence without the mediator's help. She did not know which word was the verb in the sentence until the mediator told her.

- **Koko** Koko answered all three items correctly, and he knew the part of speech of some choices including "widely, width, accepted, acceptance" without using a dictionary. However, his correct answers were not based on the understanding of the part of speech function and the sentence structure. For item 1, he used the same strategy as Smile by comparing the sentences with the sample sentences in the class materials and looked for a similar word in front of the collocation such as "is," which reflected his inability to analyze the sentence structure. For items 2 and 3, he could match the collocation types without knowing grammatical functions. Koko was confused about them and had persistent problems of reading, word confusion, misspelling, and mispronunciation.

Excerpt 3 shows an example of individualized DA in which Pukpik used a test-taking strategy for her answer.

Excerpt 3: Individualized DA - Pukpik (Part of Speech Task)

Item 2. This book provides all the __(A)_____ __(B)_____ you need to know about the disease.

A) vital, vitally, vitalness   B) inform, informed, information

28. Pukpik: อันนี้ก็เป็น verb ใช่ไหมคะ อินฟอร์มเม็ด *(ออกเสียงผิด)* เป็น verb 3 แล้วก็ information tion เป็น

adjective

'This is a verb, right? in-form-ed *(mispronounced)* it is verb 3 *(3ʳᵈ form)* and

information is an adjective.'

29. M: อ๊ะอ๊ะ tion เป็นอะไร   'No no..what is "tion"?'

30 Pukpik: tion เป็นอะไร tion เป็น adverb   'What is tion?..tion is adverb.'

31. M: อ้าว มั่วแล้ว เปิดชีทดูไหม ยังมีชีทของเก่าอยู่ไหม?

'Ahh..you just guessed. Would you like to look at the class material? Do you

still have it?'

32. Pukpik: *(เปิดชีทดูตาราง suffix)* tion เป็น noun, แล้ว vitally ก็เป็น adverb

(Looks at the list of suffixes) "tion" is a noun and "vitally" is adverb.'

33. M: ใช่ vitally เป็น adverb   'Yes, vitally is an adverb.'

34. Pukpik: *(เปิดชีทและพูดกับตัวเอง)* อันนี้เป็น noun *(ใช้เวลาคิดสักพัก)*

(opens the sheet and talks to herself) 'This one is a noun.' *(spends time to think)*

35. M: หนังสือเล่มนี้มันให้อะไรซักอย่างที่คุณต้องการรู้เกี่ยวกับโรค

'This book provides something you need to know about the disease.'

36. Pukpik: *(ใช้เวลาคิดสักพัก)* ถ้าคำแรกเป็น vital แล้วก็คำที่สองเป็น information ล่ะคะ

(spends time to think) 'How about 1ˢᵗ word is "vital," then 2ⁿᵈ word is

"information"?'

37. M: ถูกต้อง เก่งมากเลย *(เสียงดีใจ)* บอกอาจารย์มาว่าทำไมหนูถึงเลือกได้ถูกต้องคะ

'Correct. Very good' *(says happily)*. 'Please tell how you chose it correctly.'

(verbal report)

38. Pukpik: เพราะว่าหนังสือเล่มนี้มันจัดหาให้ใช่ไหมคะ แล้วก็vitalมันเป็นadjective, มีadjectiveแล้วก็ noun

ใช่ไหมคะ คำต่อไปก็หาคำที่มันเป็น noun

39. M: แล้วหนูจะแปล vital information ว่าอะไร

'What will you translate "vital information"?'

40. Pukpik: หนังสือเล่มนี้จัดหาสิ่งที่คุณต้องการสำหรับโรค แจ้งให้ทราบ กับสำคัญมาก ไม่ได้

'This book provides what you need to know about the disease..inform..vital..no'

[skip turns 41-51]

52. M: อาจารย์ขอถามหน่อยว่าในเมื่อ Pukpik ยังไม่รู้ว่า information แปลว่าอะไรเนอะ แต่มันเป็น noun แต่ทำไม Pukpik ถึงมั่นใจว่าคำข้างหน้ามันต้อง เป็น vital ที่เป็น adjective

'May I ask something? Given that you did not know the meaning of "information," but it's a noun, why were you confident that 1st word was "vital" which was an adjective?' *(verbal report)*

53. Pukpik: คิดว่าหนูเดาถูก ถ้าให้หนูดูตามนี้ใช่ไหมคะ ในนี้ไม่มี verb แต่มี adjective ค่ะ

'I think I guessed correctly. When I looked at it, there was no verb but an adjective.'

54. M: คือ choice ไม่มี verb ให้ แต่มี adjective ให้, อ๋อคือเหมือนกับตัดข้อที่เป็น verb-noun ออก แล้วทำไม ถึงข้ามข้อที่ เป็น adverb ไปล่ะค่ะ

'the choices don't have a verb but they have an adjective. Ahh..it's like cutting the possibility of the verb-noun collocation.'

55. Pukpik: แล้วมันก็เป็นคำที่หนูคิดว่าน่าจะเป็นมากที่สุดค่ะ

'I think it was the most possible answer.'

56. M: คือเหมือนใช้การเดาน่ะแหละ   'So, it's like guessing.'

57. Pukpik: การเดาล้วนๆ   'It's only guessing.'

58. M: ทีนี้เดี๋ยวอาจารย์แนะนำนิดนึงนะคะ Pukpikจะเห็นว่า the book เป็นประธาน, provide เป็น..?

   'I'd like to teach you something. You see "the book" is the subject, provide
is…?'

59. Pukpik: เป็นกิริยา   'verb'

60. M: เพราะฉะนั้นมันให้บางอย่าง บางอย่างที่มันให้มาจะต้องเป็นกรรม สิ่งที่เป็นกรรมได้จะต้องเป็นคำประเภท?

   'So it provides something. That something must be the object. What word
class can be the object?'

61. Pukpik: adjective

62. M: อ๊ะอ๊ะอ๊ะ   'No no'

63. Pukpik: เป็น noun   'It's a noun.'

64. M: ฉันรักเธอ เธอเป็น noun นี่ก็เหมือนกัน หนังสือให้บางอย่างที่เป็นคำนามที่เป็นกรรมของประโยคนี้ ถ้าตามหลักภาษา
แล้วมันควร เป็นคำที่ถูกเลือก *(หมายถึง information)* แล้วพอมันมี noun เราก็มี adjective มาขยายคือ vital

   'I love you. "You" is a noun too. The book provides something that is the
   object of this sentence. According to the sentence structure, it *(refers to
   "information")* should be selected. When there is a noun, we have the
   adjective to modify which is "vital."

65. Pukpik: ข่าวสารที่สำคัญมาก   'vital information'

65. M: ใช่ information เป็น noun เนอะ   'Yes, "information" is a noun.'

   In conclusion, dynamic assessment could help the participants combine words

according to the collocation types which were represented in terms of grammatical

patterns including adjective-noun, verb-noun, adverb-adjective, and adverb-past participle. However, most of the participants, except Jee, did not understand how a collocation type functioned in a contextual sentence because they did not know the sentence structure although the mediator taught them the function and position of a noun, verb, adjective, and adverb before doing GDA. The results implied that using the word's grammatical function was beyond their zone of proximal development.

C. Guessing Meaning from Context Task

The dynamic assessment (DA) in this task aimed to teach the participants to use the guessing meaning from context strategy to infer the meaning of the missing academic word from a 50-60-word passage. The vocabulary constructs were the concept and referents as well as the form and meaning. The concept and referents were retrieved from reading the context. The form and meaning were derived from the provided multiple choices.

C.1) GDA – Regular Task (Guessing Meaning from Context Task)

At the outset of the guessing meaning from context task, the mediator allowed the participants to read quietly for a few minutes and guess the meaning of the missing word. The participants were asked to cover the multiple choices a, b, c, and d with a piece of paper to ensure that they did not look up the choices before reading. However, the participants were so quiet that the mediator had to ask them to help each other identify each passage topic. Unfortunately, they could not guess the meaning of the missing word although all the contextual words were in the 1st 1000 word family level or the highest-frequency level, and the passage was designed for 98% text coverage for successful guessing. Thus, the mediator had to help them read line by line and guide them to look up some words in a dictionary.

The stage of DA mediation was mainly stage 4 (more explicit feedback by focusing on the word and phrase levels), which was the last stage before providing the answer. The demand for more explicit feedback signaled that this task was extremely challenging for them. After the mediator helped them read the passages, they could guess the correct meaning of two out of six items and the acceptable meaning of four items. The acceptable meaning meant that it was acceptable for the context although the context was not designed for it. When the participants selected the word form from the four multiple choices, they needed to look up all the choices' meanings in a dictionary and answered five out of six items correctly on the first attempt.

The instances of group interaction were minimal as the participants said that the task was challenging, and they needed time to process. The data from the students' diaries also illustrated that the participants thought this task was difficult and they could not understand the passage. Smile and Leejen explained the problem they had when reading a sentence. Smile said she did not know how part of speech was related to the sentence structure nor did she know the vocabulary in the passage. Moreover, misunderstanding of the part of speech and spelling appeared in Koko's diaries since he wrote *characterize (n) and *comprehensirs (adj). The researcher's field note remarked on the quietness among the participants, especially Koko, Leejen, and Jee, and the mediator's struggle to stimulate them to talk. Excerpt 1 portrays when the participants gave an acceptable and then correct meaning after receiving more explicit feedback.

Excerpt 1: GDA - Regular Task (Guessing Meaning from Context Task)

Item 1. The report shows that the managers wanted to support the workers. However, some workers thought that the managers did not tell their good work to other workers,

because there was no ………………. from other workers in the office. There should

be a system to let others know, feel good, and talk about it.

What is the word meaning? _____

a. recognition   b. depression   c. selection   d. combination

1. M: จะให้เวลาอ่านประมาณ 1-2 นาทีแล้วเดามาเลยว่าคำที่หายไปน่าจะแปลว่าอะไรเป็นภาษาไทย

    'I will allow you to read for 1-2 minutes and guess the meaning of the missing

word in Thai.'

2. Ss: *(1.15 minutes of silent reading)*

3. M: เดาแบบยังไม่ต้องเปิดดิคชันนารีใดๆทั้งนั้นนะคะ ให้พึ่งตนเอง

    'Guess by not using any dictionaries. Rely on yourselves.'

4. Ss: *(1.50 minutes of silent reading)*

5. M: คิดว่ายังไงคะ มีความหมายอะไรในใจหรือยัง

    'What do you think? Is there any meaning in your mind?'

6. Ss: *(43 seconds of silent reading)*

7. M: You can share. ไม่ต้องกลัวว่ามันจะผิดหรือเปล่าเพราะเดี๋ยวเราก็จะรู้คำตอบที่ถูกท้ายสุดอยู่ดี

    'Do not be afriad that it will be wrong because you will know the correct

answer at the end.'

8. Ss: *(22 seconds of silent reading)*

9. M: Koko ว่าไง   'What do you think, Koko?'

10. Koko: มันเป็นเกี่ยวกับนิตยสาร   'It is about a magazine.'

11. M: Koko คิดว่าเป็นเรื่องนิตยสาร แล้วคนอื่นล่ะคะ   'A magazine? What do the others

think?'

12. Smile: เป็นข่าว คนอื่นว่าไง   'News'

13. Jee: รายการโทรทัศน์   'A television program'

14. M: Pukpik and Leejen มีไอเดียอะไรในใจไหมคะ   'Pukpik and Leejen, any ideas?'

15. Pukpik, Leejen: *(ส่ายหน้า)*   '*(shake their heads)*'

16. Pukpik: ยังแปลไม่ค่อยได้   'I still can not translate the passage.'

17. M: อาจารย์จะใบ้ระดับ passage เนอะ Smile ให้ความหมายใกล้เคียงมาก ให้ดูคำว่า manager แปลว่าอะไรเอ่ย

     'I will guide you from the passage level. Smile gave a close meaning. Please look at the word "manager." What does it mean?' *(mediation stage 4)*

18. Jee: ผู้จัดการ   'Someone who manages.'

19. M: มีคำว่า support มีใครรู้คำนี้ไหมคะ

     'There is the word "support." Does anyone know it? *(mediation stage 4)*

20. Smile: สนับสนุน   'Promote'

21. M: manager อยากจะ support คนงาน workers แล้วมันมีคำว่า however แต่ว่าคนงานบางคนก็คิดว่า manager เนี่ย ดูทั้งประโยคนี้นะคะ *(ไฮไลท์ tell their good work to other workers)* manager ไม่ได้ทำอะไรเอ่ย

     'The manager wanted to support workers. There is the word "however." But some workers …Please look at this sentence (*highlights "tell their good work to other workers)*. What didn't the manager do?' *(mediation stage 4)*

22. Pukpik: ไม่ได้ทำงาน   'Did not work'

23. M: ไม่ได้ tell คืออะไร   'What does "did not tell" mean?'

24. Smile: ไม่ได้บอก   'Did not inform'

25. M: ไม่ได้บอกเกี่ยวกับ?   'Did not inform about?'

26. Smile: การทำงานที่ดี   'Good work'

27. M: การทำงานที่ดีของพวกเขาต่อคนงานคนอื่นๆ เพราะอะไร มาดูประโยคนี้ค่ะ (ไฮไลท์ because there was no

……………… from other workers in the office) ตรงประโยคนี้จะบอก ให้ลองดูความหมายเอง

Their good work to other workers because…Please look at this clause

(highlights because there was no ……………… from other workers in the office). This

clause will tell. Please consider the meaning by yourselves. *(mediation stage 3)*

28. Ss: *(9 seconds of silent reading)*

29. M: เพราะว่ามันไม่มี   'Because the was no…?'

30. Ss: *(4 seconds of silent reading)*

31. M: ไม่มีอะไรซักอย่างจากคนงานคนอื่นๆในออฟฟิศนะคะ ดูประโยคต่อมา มันควรจะมี system คืออะไร?

'There was no something from other workers in the office. Look at the next

sentence.

There should be a "system" - what is it?' *(mediation stage 4)*

32. Pukpik: ระบบ   'A set of formal procedure'

33. M: ระบบที่ทำให้คนอื่น know คืออะไรเอ่ย

'a system to let others know. What does it mean?' *(mediation stage 4)*

34. Pukpik: รู้   'Acknowledge'

35. M: feel good?   'Feel good?'

36. Jee: รู้สึกดี   'Feel positive'

37. M: รู้สึกดีและพูดถึงเกี่ยวกับ good work ที่คนงานทำ กลับมาที่ missing word Smile บอกว่าเป็นข่าว ไม่มี

การเป็นข่าว จากคนงานคนอื่น คงไม่ใช่

'feel good and talk about the good work they did. Let's come back to the missing word. Smile said "being news." If there was no "being news" from other workers, it may not be like that.'

38. Pukpik: ไม่มีการพูดถึง   'No talking about?'

39. M: ไม่มีการพูดถึง ได้ ความหมายประมาณนั้น นั่นก็คือความหมายว่าการรับรู้ การตระหนัก Now I'd like you to look at the choices ดู choice เบื้องต้น คิดว่าคำไหนเกี่ยวกับ การตระหนัก การรับรู้ การพูดถึง หรือไม่คุ้นสักคำ

'No talking about. The meaning is close. It should mean acknowledgement, recognition. Now I'd like you to look at the choices. Look at the choices first. Which word do you think mean recogniton, acknowledgement, talking about, or you don't know any of them?'

40. Pukpik: *(ส่ายหน้า)*   *(shakes her head)*

41. M: It's ok. You can search in a dictionary. แล้วเลือกมา 1 คำให้อาจารย์

'It's ok. You can search in a dictionary. Choose one answer for me.'

42. Ss: *(1.15 minutes of silence: search the choice meaning)*

43. Leejen: ข้อ a   'Choice a'

44. M: ใช่ค่ะ recognition เจอความหมายภาษาไทยว่าอย่างไร

'Yes, recognition. What Thai meaning have you found?

45. Leejen: หนูเจอแต่การยอมรับ   'I found only "acception."

46. M: ได้ เวลาเรา recognize หรือมีคน recognize เรา เช่น นั่น Leejen ที่ขยันเรียนวิชานี้ใช่ไหม เค้าจะ recognize สิ่งดีที่เราทำ พอทำได้เนอะ

'OK. When you recognize or someone recognizes you; for example, that's Leejen who is so diligent in this subject, they recognize the good thing we do. Do you think you can do this kind of task?'

47. Pukpik: nod her head

48. M: recognition เป็นคำนาม มันมีอะไรซักอย่าง no ตรงนี้ต้องตามด้วยนาม *(ชี้ที่ there was no……)*

'recognition is a noun. "There was no" must be followed by a noun (points at there was no…)'

Excerpt 1 portrays item 1, the first item of the regular task, that the participants took the longest time to comprehend. The mediator had to urge them to share ideas several times and asked Koko in turn 9. Four participants did not understand the topic as Koko thought it was about a magazine in turn 10 and Jee said it was about a television program in turn 13, whereas Pukpik and Leejen did not have any idea at all. Moreover, Pukpik said she could not translate the passage. Only Smile gave the acceptable meaning of "being news" in turn 12. Thus, the mediator helped them in the sentence and word levels onward from turns 17 to 37 until Pukpik was able to correctly guess the meaning in turn 38. When they were allowed to look up the meaning of the choices, Leejen selected "recognition" correctly, but the mediator had to clarify the Thai meaning and part of speech for them to understand. Clearly, the mediator explained on the word level the most (mediation 4) and occasionally on the sentence level (mediation 3).

C.2) GDA – Transfer Task (Guessing Meaning from Context Task)

The transfer task was more challenging than the regular task because five words in the passage were either in the 2nd and 3rd 1000 levels making the percentage of text coverage lower than desirable for successful guessing, which was

88% to 90% not 98%, and the participants took 23 minutes longer than the regular task to complete it. The mediator still had to stimulate them, albeit less than the regular task, to share ideas. As for the stages of mediation, most mediation that helped the participants choose the correct answer was in stage 4 (the word and phrase levels), although there were a few instances of mediation stage 2 (the passage level) and stage 3 (the sentence level). The mediator still had to exert a lot of effort to help them read to the word level and the participants needed to search the meaning of some words to comprehend the passage. After they understood the context, they were able to guess the correct meaning of three out of six items and the acceptable meaning of four out of six items.

Like the regular task, the participants had to search for the meaning of the four multiple choices to be able to get the answer, and they answered five out of six items in the first attempt correctly. As for the group interaction, the participants interacted with each other more than they did in the regular task, but Koko and Leejen were quiet. The students' diaries showed that they became more familiar with the task but still could not read well and knew little vocabulary. Koko still wrote wrong word meaning and part of speech in his diary as usual such as "interviewed" (adj) *สัมพันธ์ (*relate). The field note also recorded an instance of Koko's limited processing capacity to understand grammar. To illustrate, during the intervention, Koko asked about the difference between "because" and "because of," and the mediator explained in detail that "of" was a preposition that must be followed by a noun or gerund, but Koko was confused and only noted that "because" must be followed by a sentence. Excerpt 2 shows the struggle of reading the context including long reading time, word confusion, content confusion, not knowing word meaning, wrong choice selection,

and the stage of mediation at the word and phrase levels.

Excerpt 2: GDA - Transfer Task (Guessing Meaning from Context Task)

Item 3. Throwing is often considered a ……………… or basic motor skill. However, a variety of different exercise routines should be implemented throughout the year to teach students different ways of getting and staying fit such as exercise to music, and fitness games. Teachers should use creative activities to make students want to exercise.

What is the word meaning? _____

a. formal   b. creative   c. fundamental   d. alternative

1. M: มาสู่ข้อ 3 ค่ะ ปิด choice ไว้ก่อนนะคะแล้วอ่านได้เลย

     'Here we are at item 3. Close the choices first and start reading.

2. Ss: *(2.02 minutes of silent reading)*

3. M: ถ้ามีไอเดียอะไรพูดออกมาเลย อาจารย์จะได้ไกด์ได้ว่ามันใช่ไหม และเพื่อนจะได้เรียนรู้จากเราด้วย

    If you have any ideas, please say it, so I can guide you if it is correct or not and your friends will learn from you too.'

4. Ss: *(1.17 minutes of silent reading)*

5. M: เงียบนานมาก   'You have been quiet for a long time.'

6. Jee: เกี่ยวกับทักษะของอะไรซักอย่าง   'It's about a skill of something.'

7. M: โอเค มาถูกทางแล้ว เจอคำไหนในนี้ที่เรารู้บ้างคะ

    'OK. You are on the right track. Which word do you know?'

8. Smile: คำว่า different ค่ะ   'The word "different"

9. M: different แปลว่า?   'Different means?'

10. Smile: *(ขำ)*   *(laughs)*

11. M: Smile ว่าไง   'What do you think, Smile?'

12. Smile: different แปลว่าตัวอย่าง   'Different means an example.'

13. M: ว้าย!   'Oh no'

14. Smile: ไม่ใช่ ไม่ใช่ตัวอย่าง *(หันไปหา Pukpik)*

   'No, it is no an example.' *(turns to Pukpik)*

15. Pukpik: ยาก   'Difficult'

16. Smile: difficult อันนั้น difficult   'Difficult...that is difficult'

17. M: difficult แปลว่ายาก แล้ว different ล่ะ

   'Difficult means not easy… what about different?'

18. Pukpik: แตกต่าง   'Not the same'

19. M: แตกต่าง ถูกต้องนะคะ น.ศ.ดูให้ดีนะ อาจารย์จะไกด์ว่า แค่อ่านประโยคแรก เราจะได้คำตอบแล้ว

   'Not the same…correct. Please look carefully. I'd like to guide that only

reading the first sentence *(highlights throwing is often considered a… or basic motor*

   skill.) will give you the answer. *(mediation stage 3)*

20. Ss: *(8 seconds of silent reading)*

21. Leejen: เรื่องเกมค่ะ เกี่ยวกับเกม   'It's about a game.'

22. M: เกี่ยวกับเกม ยังไม่ใช่คำตอบนะคะ

   'No, it's not about a game. Not the answer.'

23. M: อาจารย์ขอถามว่าในประโยคแรกมีคำไหนที่เราไม่รู้บ้าง รู้จักคำว่า consider ไหม

   'Let me ask you which word in the first sentence that you don't know. Do you

know consider?'

24. Smile: *(ส่ายหน้า)* ไม่รู้จักค่ะ   *(shakes her head)* 'I don't know.'

25. M: รู้คำว่าthrowing มั้ยคะ throwing รู้จักคำนี้ไหม throw *(ทำท่าขว้าง)*

     'Do you know "throwing"? Throwing – do you know it? Throw *(imitates throwing)*'

26. Ss: *(เงียบ, ส่ายหน้า)*   *(quiet and shakes heads)*

27. M: เปิดสองคำนี้ได้   'You can look up these two words.'

28. Pukpik: consider พิจารณา

     'Consider means to believe someone or something to be'

29. M: พิจารณาหรือนับเป็น เพราะเป็น passive voice… throwing ถูกพิจารณาว่าเป็น หรือ throwing นับเป็น

     "Considered or regarded" as because it is a passive voice. Throwing is considered or throwing is regarded as.'

30. Ss: *(10 seconds of silence: search words on mobile phones)*

31. M: Do you know the word "basic"?

32. Jee: พื้นฐาน   'of the simplest kind'

33. M: ตอนแรกที่ Jee บอกว่าพื้นฐานอะไรสักอย่าง ความหมายใกล้มากแล้ว

     'When Jee first said it was a basic of something…the meaning was very close.'

34. Ss: *(30 seconds of silence: search words on mobile phones)*

35. M: หาคำว่าอะไรกันอยู่คะ Leejen หาคำว่าอะไร

     'Which word are you looking for? Leejen, which word?'

36. Leejen: หนูหาคำว่า throwing แปลว่าขว้างปา

'I was looking for "throwing." It means to send something through the air with force.'

37. M: ขว้างปา การขว้างถูกคิดว่าเป็นหรือนับว่าเป็นอะไรซักอย่าง แล้วไงต่อ ดูส่วนด้านหลัง

'Throwing..throwing is considered or regarded as something…and then? Please look at the following words.'

38. Pukpik: พื้นฐาน   'Basic'

39. M: พื้นฐานทางด้าน motor คืออะไรคะ   'Basic motor…what is motor?'

40. Leejen: เครื่องยนต์   'Car engine'

41. M: *(ขำ)* motor คือการเคลื่อนไหว เพราะฉะนั้นคำที่หายไปมันคืออะไรเอ่ย

(laughs) Motor is movement. So, what is the missing word? *(mediation stage 4)*

42. Jee: เบื้องต้น ขั้นแรก   'Fundamental…primary'

43. M: ได้ ดู choice ได้เลยค่ะแล้วเลือกเลย แต่ความหมายจะตรงกับที่ Jee บอกมา

'Yes, you can look at the choices and choose but the meaning will match what Jee said.'

44. Ss: *(search the choice meaning: 34 seconds)*

45. Koko: creative

46. M: not that choice

47. Pukpik: fundamental

48. M: fundamental - that's the answer. fundamental แปลว่าอะไรคะ

'Fundamental - that's the answer. What does fundamental mean?'

49. Pukpik: โดยพื้นฐาน   'Basic'

50. **M:** การโยนถือว่าเป็นทักษะการเคลื่อนไหวพื้นฐาน และสิ่งที่มาบอก clue ตรงนี้คือคำว่า or นะคะ คำว่า

fundamental มีความหมายเดียวกับคำว่า

'Throwing is considered a basic motor skill and what tells the clue is the word "or."

'Which word has the same meaning as "fundamental"?'

51. Pukpik: Basic

Excerpt 2 shows that the participants took quite a long time to comprehend the passage (3 minutes 19 seconds in total), so the mediator had to stimulate them to share ideas. It also illustrated word confusion; for instance, Smile misunderstood "different" as "example" in turn 12, and Pukpik misunderstood "different" as "difficult" in turn 15. When the mediator mediated them in stage 3 (the sentence level), Leejen misunderstood that the sentence was about a game in turn 21. Later, the mediator discovered that the participants did not know the words "consider" and "throwing" as seen in turns 23-26, and they had to consult a dictionary. In addition, the mediator had to give feedback on the word level (stage 4) for the mistaken meaning of "motor" as "engine" to be "motion" in turn 41. Therefore, the participants needed mediation at the word level to guess the meaning correctly in the transfer task. Finally, after the participants looked up the choice meaning, Koko chose the wrong choice "creative." He revealed in the verbal report that it meant "able to build a skill." The mediator agreed that it could mean "able to build," but explained to him the clue "or" and the word "basic" that led to the correct answer "fundamental."

C.3) Individualized DA (Guessing Meaning from Context Task)

The individualized DA contained two items for each participant to work on. The first item had the same difficulty level as the regular task and the second item was

at the same level as the transfer task. Regarding the first item, they had to frequently look up the meaning of many words in the passages to understand context. This implied that although 98% text coverage to support successful guessing existed in the first item, the low proficiency students still could not understand the context without consulting a dictionary. As for the second item, all the participants admitted that it was very difficult for them. Most participants could not do it and looked up almost all the words and the mediator had to help them in every detail. Moreover, the mediator could not give the graduated mediation stages as planned because the participants needed tremendous help in reading from the beginning due to not knowing vocabulary and grammar and lacking reading skill. In summary, the guessing meaning from context task seemed to be too difficult for most of them to learn during the GDA, because the individualized DA showed that they could not regulate their learning. The poor performance during the individualized DA also answered why some participants, Leejen and Koko, were quiet during GDA. The data triangulation from the recordings, verbal report, researcher's field notes, and students' diaries revealed varied individualized DA performance of each participant as follows.

- **Jee**   Jee understood about half of the passage in item 1, which had the same difficulty as the GDA regular task, and needed guidance at the sentence level as she misunderstood a bit of the sentence structure. Regarding item 2 that had the same difficulty as the GDA transfer task, Jee understood it less and needed the guidance at the word level. For these two items, she had to look up words in a dictionary and sometimes did not know the verb form. After knowing the choices' meanings, she could choose the correct answers for both items. She needed the least assistance

among all the participants. Her performance implied that she progressed the most but still experienced difficulties when dealing with a more difficult passage.

- **Smile**   Smile hardly understood item 1 as she had several problems with grammar such as pronouns, tense, and apostrophe s. However, she could guess the Thai meaning of the missing word but could not select the correct choice although she knew the choice's meaning. For item 2, which was more difficult, she did not know many more words and needed a great deal of help from the mediator with almost all the details. Her performance implied that the guessing meaning from context task was too difficult for her to regulate the learning.

- **Pukpik**   Pukpik needed assistance to the word level in item 1 to comprehend the passage. She had to look up many words in the context and could not distinguish between the base and inflected forms of a verb. However, she could give an acceptable meaning for the missing word and select the correct choice after knowing its meaning. Regarding item 2, she had to look up almost all the words, and the mediator had to guide her to the word level, assist her on how to use a dictionary, explain verb forms, and clarify her word confusion.

- **Leejen**   Leejen needed tremendous help in reading both passages in items 1 and 2 in every detail. She had very little background in reading and grammar and knew little vocabulary. However, she could give an acceptable meaning for item 1 after the mediator helped her read the passage. As for item 2 that was more difficult, she required more

assistance from the mediator. Moreover, she could not select the right answer for the passages in both items 1 and 2 because she was misled by the meaning of a translation tool. Therefore, it might be concluded that the group dynamic assessment (GDA) did not help her regulate the learning in the guessing meaning from context task as evidenced in her poor performance in individualized DA. She wrote in her GDA diary that the task was very difficult and wrote in her individualized DA diary that she could not understand the passage.

- **Koko**   Koko had so much difficulty understanding the passage. The mediator had to help him substantially. Regarding item 1, he misunderstood the topic and his word confusion misled his comprehension completely. It also made him select the wrong choice. In item 2 which was more complex than item 1, his word confusion and carelessness in spelling words while using an online dictionary frequently emerged. In sum, it seemed that the guessing meaning from context task was difficult for him. The fact that his performance was poor in individualized DA suggested that he learned little from GDA and there was a great deal of knowledge shortage that DA could not solve.

Excerpt 3 demonstrates an example of individualized DA. Koko had many problems with word confusion which obstructed him from comprehending the passage.

Excerpt 3: Individualized DA - Koko (Guessing Meaning from Context Task)

Item 1. For years now, I have noticed that many clips of movies that are being advertised use music from other movies instead of their music. The music from well-

known movies, especially those with good feelings, can act on a person's ………………. about whether the movie is good or not. What do you think? What is the word meaning? _____

a. manner   b. judgment   c. transition   d. emphasis

1. M: บอกความเข้าใจ passage มาได้เลยค่ะ   'What do you understand from the passage?'

2. Koko: *(อ่าน1.30 นาที)* เหมือนมันเป็นเกี่ยวกับละครเวทีไหม

     (1.30 minutes of silent silent reading) 'It's like a play.'

3. M: มันเป็นเกี่ยวกับ movies คืออะไรเอ่ย   'It's about movies. Do you know movies?'

4. Koko: หนัง   'Movies'

5. M: แล้วก็มี?   'And?'

6. Koko: เพลง   'Music'

[skip turns 7-20]

21. M: เดี๋ยวเรามาดูประโยคนี้ดูนะ มันมีคลิปหนังที่กำลัง…

'Let's look at this sentence. There are movie clips that are…

22. Koko: ลงโฆษณา   'That are being advertised'

23. M: ลงโฆษณาอยู่ และดนตรีจาก…   'That are being advertised and music' from…?

24. Koko: หนังอื่นๆ มาติดตั้ง   'Other movies to install'

25. M: เดี๋ยวๆ ยังไม่มีมาติดตั้ง instead of อันนี้รู้ไหมเอ่ย

     'Wait wait…there is nothing install. Do you know "instead of"?

26. Koko: มันไม่ได้อ่านว่า อินไซด์ เหรอฮะ   'Isn't it pronounced "inside"?'

27. M: เปล่าค่ะ instead   'No, instead'

28. Koko: ผมนึกว่ามันอ่านว่าอินไซต์ เลยนึกว่ามันติดตั้ง

    'I thought it's pronounced "inside," so I thought it's install.'

[skip turns 29-34]

35. M: หนังที่มีชื่อเสียงทำให้รู้สึกดีเนี่ย ดนตรีตรงนั้นจากหนังแบบนั้นเนี่ย can act on a person's something ดู

ตรงนี้นะคะ จะแปลว่าอะไร Do you know apostrophe s? รู้จัก 's ไหมคะ?

    'Well-known movies that give food feelings. That music for those movies can

act on a person's something. Look at this. How will you translate? Do you know

apostrophe s? Do you know 's?'

36. Koko: ไม่รู้ฮะ   'I don't know.'

37. M: ถ้าอาจารย์พูดว่า This is Jim's house.   'If I say, this is Jim's house.'

38. Koko: เขาอยู่บ้าน   'He is home.'

39. M: เดี๋ยวก่อน เอาใหม่ๆ นี่คือบ้าน…   'Wait wait. Do it again. This a house…'

40. Koko: ของจิม   'Of Jim's'

41. M: เพราะฉะนั้นดนตรีตรงนี้สามารถ act on อะไรซักอย่างของคนๆหนึ่ง รู้จัก act ไหม

    'Therefore, this music can act on something of a person. Do you know "act"?'

42. Koko: ศิลปะเหรือฮะ   'Is it "art"?'

43. M: act ไม่ใช่ art   'Act is not art.'

44. Koko: action เหรอฮะ   'Is it action?'

45. M: action แปลว่าการกระทำ พอเป็น verb act คือทำ เพราะฉะนั้นดนตรีส่งผลหรือทำอะไรบางอย่างต่อสิ่งนี้ *(ชี้ที่*

ช่องว่าง) ของคนๆนึง ลองดูประโยคที่เหลือ Do you know whether? เราเจอคำนี้เมื่อวาน คุ้นๆมั้ย ถ้าไม่คุ้นเปิดดิคได้

นะคะ

'Action means the process of doing something. When it's a verb, it means do, so the music affects or do something on *(points at the blank)* of a person. Please look at the rest of the sentence. Do you know whether? We met this word yesterday. Are you familiar with it? If not, you can use a dictionary.'

Koko: ถ้าเป็นฤดูฝนมันก็อ่านเวเธอร์ใช่ไหมฮะ   'A rainy season is also whether, right?'

M: weather อากาศแต่อันนี้คนละตัวสะกดกัน *(ชี้ไปที่ whether)*

'Weather means the conditions in the air, but this one has a different spelling'

(points at "whether")

[skip turns 46-56]

57. M: ให้ดู choice เพื่อช่วยนะคะ เปิดดิคได้นะถ้าไม่ทราบ

'You can look at the choices to help and look up the meaning if you don't know.'

58. Koko: transition หรือเปล่าฮะ   'Is it "transition"?'

59. M: transition แปลว่าอะไร   'What does "transition" mean?'

60. Koko: *(เปิดดิค)* การเปลี่ยน, *(เปลี่ยนคำตอบ)* จั๊มแมนฮะ *(ออกเสียง judgmentผิด)*

(seaches in a dictionary) 'Changing' *(then changes the answer)* 'Jump man'

(mispronounces "judgment")

61. M: แล้ว judgment แปลว่าอะไรคะ   'What does judgment (recast) mean?'

62. Koko: การเต้นฮะ   'Dancing'

63. M: *(ขำ)* เสิร์ชก่อนได้นะ   *(laughs)* 'You can search the word first.'

64. Koko: อ๋อ การตัดสินใจ แล้วทำไม่ จั๊ดแด๊น มันแปลว่าการเต้นล่ะฮะ มันเป็นแอพฯนึง มันมีคำว่าจั๊ดเหมือนกัน

'Ahh…deciding. And why does "just dance" mean dancing? It's an app. It had

the word "just" too.'

65. M: มันคนละคำกัน การเรียนของKoko ต้องใส่ใจตัวสะกดมากขึ้นนะคะ คำว่า just dance dance แปลว่าเต้น ส่วน

whether กับ weather ตัวสะกดต่างกัน Kokoวัดจากเสียง เสียงดูคล้ายกันแต่ตัวสะกดต่างกัน แต่จริงๆแล้วคำว่า

judgment กับ just dance เสียงต่างกันเลย เวลาเรียนให้ใส่ใจทั้งเสียงและตัวสะกด เลือกข้อ?

'They are different words. Koko, you have to pay more attention to spelling

when learning. For the word "just dance," dance means movements performed to

music.

"Whether" and "weather have different spellings. Koko, you rely too much on

sound.

The sound may be similar but the spellings are different. Actually, the sound of

"judgment"and "just dance" is different. When you study, pay attention to

both sound and spelling. Which choice do you choose?

66. Koko: ข้อ b   'Choice b'

67. M: ถูกต้อง judgement   'Correct…judgment'

[skip turns 68-71]

72. M: แต่ครูมีคำถามว่าทำไมKokoเลือก transition ตอนแรกโดยที่ยังไม่รู้ความหมายของ transition

'I have a question why you chose "transition" without knowing the meaning of

"transition"?' *(verbal report)*

73. Koko: มันเหมือนการแปลความหมายของเพลง   'It's like translating the lyrics.'

74. M: transition ไม่ใช่คำว่า translation   "Transition" is not "translation."

75. Koko: มันคล้ายๆกัน   'They are quite similar.'

76. M: ตัวสะกดต่าง เสียงต่าง มันไม่ใช่คำเดียวกันแน่นอน และเราไม่สามารถอิงแบบนั้นได้ มันไม่ใช่ prefix/suffix ที่จะเชื่อมโยงกันได้ มันจะคนละคำกันเลย เพราะฉะนั้นเปิดดิคเช็คก่อนเนอะ

'Different spellings and different sounds. They are not the same word definitely and we cannot assume like that. They are not a prefix or a suffix that can be linked. They are different words. So, you should consult a dictionary first.'

In summary, DA in the guessing meaning from context task was rather ineffective. This was due to the participants' lack of English knowledge including basic vocabulary and grammar as well as reading skills. Consequently, they could not read or understand the context and sometimes could not select the right choice despite knowing its meaning.

D. Sentence Writing Task

The sentence writing task was for the participants to use a new word to form a sentence. In this task, the participants wrote the sentences in a pair and the dynamic assessment (DA) happened at the revision stage. The vocabulary constructs were the concept and referents, grammatical functions, and collocation. It meant that the word matched its concept and referent, grammatical function, and the other words or types of words used together. All of them referred to productive skills.

D.1) GDA – Regular Task (Sentence Writing Task)

The regular task had five academic words that included four main word classes. There were two nouns, one verb, one adjective, and one adverb. In this task, Jee paired with Leejen, Pukpik paired with Smile, and Koko wrote individually. As a

result, there were three written sentences for one academic word, totaling 15 sentences. The time for writing the sentences for each word ranged from 3.21 to 9.20 minutes. Almost all of their sentences portrayed that they understood and conveyed the word meaning correctly except for a sentence in which a participant misunderstood the word meaning. Nonetheless, they could not use the word's grammatical function of adjective correctly. Moreover, they often could not use other words or types of words with the target academic words correctly. In fact, 14 out of 15 sentences contained ungrammatical sentence structure; two of which obstructed the sentence meaning. Therefore, the dynamic assessment (DA) was mainly to correct the grammar. What the participants could solve after each stage of mediation was as follows:

- After mediation stage 2 (existence of error), they could add the conjunction "and" between nouns "vegetable" and "pig" and change the words "pig" to "pork" in a sentence: "I need component these vegetable, pig for food." They could change "at" to "about" in a sentence: "I have something inquiry at the law."

- After mediation stage 3 (location of error), they could change the verb "have" to "has" for the nouns "group" and "cake," and add the morpheme "s" to form a plural noun "components." They could delete a redundant verb "is" in a sentence: "fried rice have egg is component."

- After mediation stage 4 (nature of error), they could edit the misspelling of the word "ereyday" to "every."

- After mediation stage 5 (explanation of how to correct the error), they could find the adjective "attentive" to replace a verb "attend" and change

the spelling of "y" to "ies" to form a plural noun "inquiries."

- Mediation stage 6 (provision of correct form/sentence structure and its explanation) was for giving the correct form of passive voice, re-arranging the whole sentence, and demonstrating the use of adjectives and tenses.

Clearly, they could fix minor parts in their sentences which reflected their limited grammatical knowledge. The lack of grammatical knowledge also emerged such as wrong subject-verb agreement of "I" and "has," not knowing whether the determiner "some" was used with a singular or plural countable noun, and confusion between the words "some" and "something." The participants' diaries revealed that they were concerned with grammar and knew their sentences were incorrect. Due to many grammatical errors, sometimes direct feedback was employed instead of gradated mediation to reduce their cognitive load so they could focus on the more important part. Excerpt 1 portrays that reforming a whole sentence and using an adjective was still problematic for them.

Excerpt 1: GDA - Regular Task (Sentence Writing Task)

Item 4. ongoing (adj) = ต่อเนื่อง, ไม่หยุดยั้ง

= continuing to exist or develop

Example: <u>There</u> <u>is</u> <u>an ongoing investigation</u> into the cause of the crash.

      <u>S</u> + <u>V</u> + <u>Complement</u> (Adj before Noun)

<u>Discussions</u> between the residents and the government officers <u>are</u> <u>ongoing</u>.

  <u>S</u>+   <u>V.be</u> + <u>Adj</u>

Your sentence: _____

Original sentence: It is raining ongoing.

Mediated sentence: It is the ongoing rain. The rain is ongoing.

1. M: It is raining ongoing.   ongoing ในโจทย์เป็นคำประเภทไหน

   'It is raining ongoing. What word class is "ongoing"?'

2. Pukpik: เป็น adjective   'It is an adjective.'

3. Jee: เป็น verb   'It is a verb.'

4. M: หืม?   'Umm?'

5. Jee: เป็น adjective   'It is an adjective.'

6. M: พอฟังความหมายน่ะรู้เรื่อง แต่จะปรับตำแหน่งยังไงดีเพราะมี error อยู่ในตำแหน่งของ adjective

   'The meaning is communicable, but what position must be adjusted because

   the error is at the adjective position.' (mediation stage 3)

7. Pukpik: อ๋อ raining   ing กับ ing   'Ahh..raining.. ing and ing'

8. M: ไม่ได้เกี่ยวกับตรงนั้น   'No, it's not about that part.'

9. Jee: สลับตำแหน่งกันไหมคะ เอา ongoing ขึ้นก่อน raining

   'Switch the places..put ongoing before raining.'

10. M: OK เพราะอะไร   'OK, why?'

11. Jee: เพราะว่า adjective ต้องอยู่หน้า noun   'The adjective must precede the

noun.'

12. Leejen: หน้า noun   'Before the noun.'

13. M: เป็น it is ongoing raining แบบนี้หรือ? It sounds acceptable. แต่น่าจะเปลี่ยนเป็น It is the

ongoing rain. มากกว่า ongoing raining

   So, it is ongoing raining, like this? It sounds acceptable but should be changed

to be – it is "ongoing rain" more than "ongoing raining." *(mediation stage 6)*

14. Pukpik: ตัด ing ออก   'Delete ing'

15. M: ให้ตัวอย่างอีกประโยคว่า The rain is ongoing. หรือ It is ongoing rain. ตรงนี้ rain เป็นคำนาม

แต่ถ้าพูดว่า It is raining. จะเป็น Present Continuous Tense

I will give another example: The rain is ongoing, or this is the ongoing rain.
The rain here is a noun, but if we say it is raining, this is Present Continuous Tense.

Excerpt 3 shows that the participants had problems in identifying the part of speech because Pukpik's confusion in turn 7 and Jee and Leejen thought the word "raining" was a noun in turn 11, which led to the misplacement of the adjective. Therefore, the mediator adopted the mediation stage 6 to give the correct sentence and explain the part of speech and Present Continuous Tense of "it's raining."

D.2) GDA – Transfer Task (Sentence Writing Task)

The transfer task contained five academic words whose parts of speech included the four main word classes. They were one noun, one verb, one adjective, and two adverbs. The participants wrote in pairs as in the regular task, but the pair members slightly changed. Jee paired with Leejen, Pukpik paired with Koko, and Smile wrote alone. The time for writing each sentence differed pair by pair and ranged from 2.25 to 13.37 minutes. The transfer task was designed to add a little challenge where no sample sentence was provided but only guiding grammatical patterns. However, the absence of the example sentences seemed to bear no effect. The participants' performance during dynamic assessment (DA) in the revision stage resembled their performance in the regular task. They understood the word meaning and mostly could convey it in their sentences, but they sometimes could not use the words' grammatical functions or parts of speech of adjectives, adverbs, and verbs.

Furthermore, they mostly used other words or types of words incorrectly with the target academic words. Thirteen out of 15 sentences were ungrammatical, four of which impeded the sentence's meaning. Thus, dynamic assessment (DA) was mainly to fix grammar problems. What the participants could fix correctly after receiving each stage of mediation are as follows:

- After mediation stage 2 (existence of error), they could delete the word "too" in the sentence: "the rain fallen too considerably." They crossed out the word "on" in the sentence: "the rain and thunder simultaneously on last night," and solved the misspelling "knowred" to "know."

- After mediation stage 3 (location of error), they could replace the verb "has" with "is" in front of an adjective in the sentence: "breakfast has essential for everyone." They replaced "it is" with "the" and delete "to" and "and" in the sentence: "it is two situation to same and happen to simultaneously."

- After mediation stage 5 (explanation of how to correct the error), they could add the verb "happen" for the sentence: "the rain and thunder simultaneously on last night." They added the article "an" before "essential material" in the sentence: "telephone is essential material for daily life," and added the inflectional morpheme "s" to a verb "foster" in the sentence: "my family is always foster me." They deleted "is" in the sentence "he is foster Thai food for give food thai is that knowred."

- Mediation stage 6 (provision of correct form/sentence structure and its explanation) was for giving the correct tenses, the correct form of passive voice, the use of "there is," the position of the adverb, and reformulation of

the whole sentence.

Thus, their performance illustrated that they could solve only small words but were rarely able to stretch their grammatical knowledge to whole sentences. In the students' diaries, the participants were aware of their weak grammar and sentence structure. Excerpt 2 models their confusion about a basic sentence structure and parts of speech.

Excerpt 2: GDA - Transfer Task (Sentence Writing Task)

Item 3. simultaneously (adv) = โดยเกิดขึ้นพร้อมกัน, ในเวลาเดียวกัน

= happening or being done at exactly the same time

Guiding grammatical pattern: S + V + Object/Complement

Adv before V, <u>or</u> Adv after V

Your sentence: _____

Original sentence: You and me simultaneously birth time.

Mediated sentence: You and me were simultaneously born.

1. M: จะให้เพื่อนๆบอกความหมายก่อน

'I will let your friends tell the sentence meaning first.'

2. Pukpik: คุณและฉันเกิดในเวลาเดียวกัน

'You and me were simultaneously born.'

3. M: *(ขำ)* ทุกคนพยายามเข้าใจทุกอย่างได้ดีมาก How will we change it? เวลาจะบอกว่าเกิดเมื่อไหร่ใช้ภาษายังไง

Smile

เกิดวันไหน

'*(laughs)* Everyone tries their best to understand everything. How will we change it? How do we tell our birth? *(mediation stage 4)* Smile, when were you born?'

4. Smile: วันเสาร์ค่ะ   'Saturday'

5. M: เอาเดือนปีมา   'Tell the month and year'

6. Smile: 18 พ.ค.   'May 18'

7. M: Smile สามารถพูดว่า I was born on May 18 แม่ทำให้เราเกิด เราถูกทำให้เกิดขึ้นมา คือ passive voice มาแก้ตรง นี้หน่อย

       'Smile can say "I was born on May 18". The mother made us born. So, we were

born. It is a passive voice. Now, let's fix the sentence.' *(mediation stage 5)*

8. Smile: เปลี่ยนจาก birth เป็น was   'Change "birth" to "was"

9. M: เปลี่ยนจาก birth เป็น born และลบ time ออก You and me ใช้ verb อะไร *(เขียน You and me*

_____

simultaneously born)

       'Change "birth" to "born" and delete "time" What verb is for the subject "you

and me" *(Writes "you and me _____ simultaneously born)'(mediation stage 5)*

10. Koko: with

11. Pukpik: we

12. M: นามพหูพจน์ใช้ was หรือ were *(mediation stage 5)*

       'Do we use "was" or "were" for a plural noun?' *(mediation stage 5)*

13. Jee: were

14. M: simultaneously มาขยาย were born กลายเป็น were simultaneously born คือมันเกิดพร้อมๆกัน

       'simultaneously" modifies "were born" and turns to be "were simultaneously

born"

       meaning happening at the same time.' *(mediation stage 6)*

Excerpt 2 demonstrates that rearranging the sentence into passive voice was challenging for them. Although the group member understood the sentence meaning as shown in turn 2, the sentence was ungrammatical and missed a verb. The mediator guided them with mediation stage 3 (nature of error) in turn 3 and mediation stage 5 (explain how to correct the error) in turn 7 to give a sample sentence and explanation of passive voice. However, turn 8 shows that Smile's answer was wrong and she could not change the sentence to passive voice. Moreover, when the mediator scaffolded the sentence in turn 9, Koko and Pukpik did not know that passive voice needed a verb to be. Lastly, the mediator had to give choices in turn 12, and then Jee could get the correct answer. In summary, they did not know the passive voice, and their knowledge of basic sentence structure and part of speech was rather weak. The mediator had to arrange the sentence with a correct adverb position in turn 14 with mediation stage 6 (provide correct sentence structure and its explanation).

D.3) Individualized DA (Sentence Writing Task)

The individualized DA consisted of two items for two academic words: an adjective "consistent" and a verb "minimize." The format of the first item was the same as the regular task where Thai meaning, English definition, example sentences, and a guiding grammatical structure were provided. The second item was like the transfer task where everything was provided except the example sentences. However, the item format seemed not to affect the participants' performance across items. Furthermore, it was found that the participants mostly read only the Thai meaning but not the English definition, or they read it but did not understand it which sometimes made them miss the word concept.

Regarding individual performance in writing two sentences, one for each academic word, they knew the word meaning, but had problems with syntax. They were unable to form a correct sentence, especially the one incorporating an adjective. In addition, they had little knowledge of the English tenses. When using dynamic assessment (DA), only mediation stage 5 (explain how to correct the error) and stage 6 (provide the correct form/sentence structure and its explanation) seemed to work with them because they had little grammatical knowledge and frequently had language confusion. It could be said that the sentence writing task was very challenging for them, and correcting some grammar might be too far from their zone of proximal development (ZPD) because they had limited zone of actual development (ZAD). Data triangulation from the recordings, verbal reports, students' diaries, and the researcher's field notes illustrated varied performance of the five participants as follows.

- **Jee** Jee could write two sentences to convey the meaning of the given adjective and verb, but she still had trouble forming a sentence with an adjective. However, she responded to the DA mediation very well and could solve the problems with minimal guidance. When she formed a sentence using a given verb, she wrote a well-formed sentence except for the tense that she did not consider the intended time. However, her understanding of the sentence structure was not solid because she was confused about the main verb and the complement.

- **Smile** Smile could write a sentence to convey the meaning of the given adjective, but the sentence to convey the verb meaning was obscure. When she tried to use the adjective, many problems manifested. She did not know the

different functions between verb "be" and "do," the differences between "do" and "does," and the verb forms of present, past, and past participle. This lack of knowledge prevented her from correctly using an adjective in a sentence. When she wrote a sentence using a given "verb," her sentence needed a passive voice, but she did not how to fix it and tried to fix it with "do" or "did." The DA mediation stages could not be applied to Smile because she had much confusion and poor grammatical knowledge. She randomized her ideas to solve the sentences. All of these implied that she did not learn much from the group dynamic assessment (GDA).

- **Pukpik**   Pukpik understood the meaning of the given adjective, but her sentence could not convey her intended meaning, nor did she know the adjective's position. So, the mediator had to use the class material to teach her again and showed a sample sentence from a dictionary to help her understand. Thus, explicit mediation solved her problem. When she wrote a sentence using a given verb, she slightly missed its concept. However, once she understood it, she could write a well-formed sentence but was unsure if it was correct. Anyway, the verb tense needed revision, so the mediator assisted her with mediation stage 2 (existence of error) and mediation stage 4 (nature of error), but finally mediation stage 6 (providing the correct form and its explanation) helped her because she did not know the tense.

- **Leejen**   Leejen could write one sentence to convey the verb meaning. However, the sentence containing the targeted adjective needed a whole reformulation starting from choosing a new word. The mediator taught her the adjective's position and a subject-verb agreement between a pronoun and a

verb to be because she was confused with "is, am, and are." Also, the mediator provided a sample sentence for her to compare and choose the preposition. When she wrote a sentence with a given verb, it was found that she did think about the time, or the verb tense. When the mediator gave guidance that it should be the present perfect tense, she did not know about its structure or past participle (verb+ed) although the verb form was shown. Therefore, explicit mediation in explaining and providing the correct form as well as contingent mediation was used to help her deal with emerging problems.

- **Koko** Koko could not make any of his sentences comprehensible enough to convey the words' meanings. He did not know how to combine words to form a correct sentence at all. What he did was thinking of the sentence meaning in Thai and searching English words and put them together without taking English syntax into consideration. His sentence meaning in Thai was also too complex to be addressed by a simple sentence, which he could not write either. Correcting his sentences meant re-writing them again at every point and explaining many things to him directly because he did not know the basics. For example, he thought the word "that" was a verb, and the pronoun "it" was for a person. Giving him mediation stage 6 (provide correct form and its explanation) was more helpful to help him correct his language because he had much confusion and very weak English background knowledge.

Excerpt 3 demonstrates an example of individualized Da when Smile tried to use an adjective but a lot of confusion was apparent.

Excerpt 3: Individualized DA - Smile (Sentence Writing Task)

Item 1. consistent (adj) = สม่ำเสมอ, คงเส้นคงวา

> = always behaving in the same way, or having the same
>
> opinions,
>
> standards, etc.

Examples: <u>She</u> <u>is</u> <u>one of the team's most consistent players</u>.

S + <u>V</u> + <u>Complement</u>   (Adj before Noun)

<u>They</u> <u>are not</u> very <u>consistent</u> in the way they treat their children.

<u>S</u> +   <u>V.be</u> +   <u>Adj</u>

Smile's sentence: Jason was consistent exercise.

Mediated sentence: Jason does consistent exercise.

4. Smile: เจสันออกกำลังกายอย่างสม่ำเสมอค่ะ   'Jason exercises consistently.'

5. M: ความสม่ำเสมอนี่เกิดขึ้นในอดีตหรือปัจจุบันคะ

> 'Did the consistence happen in the past or present?'

6. Smile: เค้าก็ยังทำทุกวันค่ะ   'He still does it every day.'

7. M: งั้นเรามาแก้ไขตรงนี้หน่อย ถ้ายังทำทุกวัน Should we change the verb here? *(ชี้ที่ was)*

> 'Then we must change something here. If he still does it, should we change the
>
> verb here? *(points at "was")' (mediation stage 3)*

8. Smile: แล้วเรายังใช้ was ได้ไหมคะอาจารย์, was แปลว่าอะไร

> 'Can we use "was"?' What's its meaning?'

9. M: อ้าว แล้วที่เขียนมาแปลว่าอะไร

> 'Oh..what do you mean when using "was"?'

10. Smile: หนูจะใช้ is, am, are มันก็เป็นอยู่คือ หนูก็ว่าไม่ใช่

> 'I want to use "is, am, are." They tell the state, but I don't think it's correct.

11. M: แล้วหนูเข้าใจ was, were ว่าอะไร

'What do you understand of "was" and "were"?'

12. Smile: was, were ไม่แน่ใจความหมายแต่เค้าก็ใส่กัน หนูก็ไม่แน่ใจว่ามันหมายถึงอะไร จะเขียนแบบ Jason do

does ก็ยังไงๆอยู่ หนูก็เลยลองอันนี้มาค่ะ

'was, were – I don't understand the meaning but I've seen they have been

used. I don't understand what they mean. If I wrote Jason do does, it might have been

incorrect so I used this one.'

13. M: แล้วที่หนูเอา consistent มาวางตรงนี้ หนูมีไอเดียอะไรที่มาบอกตัวเองไหมคะว่า consistent วางไว้หลัง was

'When you put "consistent" here, you have any ideas why you put

"consistent" here – after was?'

14. Smile: ถ้าเป็นอังกฤษก็จะอ่านย้อนๆอย่างเนี้ยค่ะอาจารย์ จะเขียนว่า exercise consistent ก็ไม่น่าจะได้หรือจะเอา

อันนี้มาขยายอันนี้

'If it's English, we read backward. I don't think I should write "exercise

consistent,"

or I should take this one to modify this one.'

[skip turns 15-23]

24. Smile: ก็น่าจะเปลี่ยน was ค่ะอาจารย์   'I should change "was."

25. M: แล้วหนูจะเปลี่ยนเป็นอะไรเอ่ย   'What do you want to change it

to be?'

26. Smile: หนูก็ไม่รู้เหมือนกันค่ะ เปลี่ยนเป็น does ค่ะ   'I don't know - change to "does."

27. M: โอเค   'OK'

28. Smile: แล้วก็เปลี่ยนจากเอา exercise มาอยู่ข้างหน้าค่ะ แล้วก็เติม a-n ลงไป ก็คือ an หรือเปล่าคะ แล้วก็

consistent หนูไม่แน่ใจ

'Then I put "exercise" at the front and add a-n..an? Then consistent..I am not

sure.'

[skip turns 29-34]

35. M: เราจะเก็บ exercise โดยไม่ต้องมี a, an ก็ได้ถ้ามันเป็นนามนับไม่ได้ แต่ที่อาจารย์จะถามก็คือ ทำไมถึงเปลี่ยนเป็น

does

'We can keep only "exercise" without a, an when it's an uncountable noun.

What I'd like to ask is why did you change to "does"?' *(verbal report)*

36. Smile: เพราะว่า does ก็เป็นช่องที่เท่าไหร่ก็ไม่รู้ของ do ที่แปลว่าทำ

'Because "does" is…I don't know what verb form it is of "do" that means act'

37. M: ช่องที่เท่าไหร่ก็ไม่รู้   'You don't know its verb form?'

38. Smile: *(หัว)* ช่องที่ 3 ค่ะ   '*(laughs)* verb 3 (past participle)'

39. M: *(shows disapproving facial expression)*

40. Smile: ช่องที่ 2   'Verb 2 (past)'

41. M: เอาใหม่   'Try again'

42. Smile: หนูก็ไม่รู้ค่ะ กิริยา 3 ช่องหนูยังท่องไม่ได้เลยค่ะอาจารย์ แต่มันมีความหมายว่าทำ

'I don't know. I still can't rememeber the verb forms, but I know it means act.'

43. M: ใช่ๆ ก็นี่ไงช่อง 1 do/does, ช่อง 2 did, ช่อง 3 done, does ที่ใช้กับนามเอกพจน์ ที่อาจารย์ถามไงว่าการ

ออกกำลังกายของเค้า มัน…

'Yes, verb 1 is do/does, verb 2 is did, verb 3 is done. We use "does" with a

singular noun. That's why I ask whether the exercise…'

44. Smile: เค้าก็ทำอยู่ค่ะ   'He still does it.'

45. M: ยังทำอยู่ใช่ไหม ก็เก็บไว้เป็นปัจจุบัน ไม่ต้องเปลี่ยนเป็น past tense Anyway แต่มันก็จะสามารถแก้ไขได้อีก

แบบนึงนะคะ คือ หนูจะให้เป็น verb to be แล้วให้ adjective ตามหลัง verb to be ก็ได้ อาจจะพูดว่า Jason is

consistent ตอนนี้เรากำลัง consistent มาขยายความเป็น Jason เพราะ is, am, are คือเป็นอยู่คือ

'He still does it, so we keep as the present not the Past Tense. Anyway, it can

be modified in another way. You can use verb to be and make the adjective follow

verb to be. You may say Jason is consistent. We use "consistent" to modify Jason

because is, am, are means the state.' *(mediation stage 6)*

46. Smile: ก็คือเค้าเป็นคนสม่ำเสมอ   'He is consistent.'

47. M: แต่ถ้าอันนี้ *(ชี้ไปที่ประโยค Jason does consistent exercise)* เค้าทำการออกกำลังกายที่สม่ำเสมอ

consistent มาขยาย exercise หรือไม่ก็ consistent ตามหลัง verb to be มาขยายคน *(พิมพ์ Jason is*

consistent in exercising).

'If it's this one (points at "Jason does consistent exercise") – consistent

modifies exercise, or consistent follows verb to be to modify a person (types Jason is

consistent in exercising).' *(mediation stage 6)*

To conclude, the participants understood the word meaning and could write

sentences to convey it, but they could not use the word's grammatical function and

other words used with it correctly. Dynamic assessment (DA) in the sentence writing

task mainly functioned on assessing but not much on teaching. DA could determine

how much grammatical knowledge the participants had, which was very little. It could

identify their grammar problems, such as basic sentence structures, the passive voice,

parts of speech, adjectives, tenses, as well as cognitive processes behind the wrong

use of grammar. Moreover, the grammatical knowledge that the participants learned

from GDA, especially through explicit mediation, was not settled because the individualized DA showed that the participants still did not understand many grammatical items. In addition, direct feedback, contingent mediation, instructional materials, and a dictionary were necessary besides the DA prompts.

4.2 Students' Attitudes Toward the Use of the Dynamic Assessment Model on English Academic Vocabulary Knowledge

The findings regarding the students' attitudes toward the DA model were divided into two major points: the attitudes toward the overall DA intervention and the attitudes toward each DA task. This is because the perceived difficulties of DA tasks could affect each participant's attitudes. The data were elicited using the attitude questionnaire, semi-structured interview, and the student's diaries. The questionnaire provided Thai translation, and the latter two were carried out in Thai to prevent language barrier and to ensure comprehensiveness of the collected data.

4.2.1 Attitudes Toward the Overall DA Intervention

Regarding the attitudes toward the DA intervention, the data from the attitude questionnaire and the data from semi-structured interviews were triangulated to generate reliable findings. Table 14 shows the quantitative data on the participants' attitudes toward DA.

Table 14 *The questionnaire results on the participants' attitudes toward DA*

Item	Statement	Percentage				Levels of attitudes		
		SD	D	A	SA	M	SD	Meaning
1.	I like learning English academic vocabulary through group dynamic assessment.	0%	0%	80%	20%	3.2	0.45	moderately high
2.	I think group dynamic assessment enhances my English academic vocabulary knowledge.	0%	0%	40%	60%	3.6	0.55	high
3.	I like group dynamic assessment because of the assistance from the teacher.	0%	0%	40%	60%	3.6	0.55	high
4.	I like group dynamic assessment because of the assistance from peers.	0%	0%	60%	40%	3.4	0.55	high
5.	While I am taking group dynamic assessment, I think the teacher can correctly assess my ability to learn academic vocabulary.	0%	0%	0%	100 %	4	0.00	high

Item	Statement	Percentage				Levels of attitudes		
		SD	D	A	SA	M	SD	Meaning
6.	I feel comfortable while taking group dynamic assessment.	0%	0%	40%	60%	3.6	0.55	high
7.	Studying in a group helps me learn academic vocabulary learning easier.	20%	0%	40%	40%	3	1.22	moderately high
8.	I learn academic vocabulary from the other students in the group.	20%	0%	20%	60%	3.2	1.30	moderately high
9.	I am confident in expressing my thoughts in the group.	20%	0%	80%	0%	2.6	0.89	moderately high
10.	I like individualized dynamic assessment.	0%	0%	40%	60%	3.6	0.55	high

Note. SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree,

M = Mean, SD = Standard Deviation

Table 14 shows that the participants generally had positive attitudes toward DA as the mean of each item represented either moderately high or high degrees of agreement on the given statements. However, one participant, Koko, strongly disagreed with items 7, 8, and 9. Further individual inquiry revealed that studying in a group made him feel like studying in a large class and academic vocabulary was too difficult to remember for him. He seldom learned academic vocabulary from the other participants because he felt they learned a bit faster than him. Furthermore, it was his

nature to be a listener than a speaker in a group because he was afraid that his thoughts may be different from those of others and lead to a disagreement.

The data from the open-ended questions in the questionnaire and semi-structured interviews were analyzed and grouped into themes. They provided different angles on the participants' positive attitudes as well as concerns toward the whole DA intervention. The themes included likes and dislikes, usefulness, obstacles in DA as well as the preferences between GDA and individualized DA and recommendation. They were as follows.

A) Likes and dislikes of DA

All the participants said they liked working with friends because they helped one another to complete the tasks. They shared ideas and learned vocabulary from their friends. One mentioned the positive environment where she could speak or answer questions without having to feel worried and the teacher offered her guidance when she misunderstood something. In terms of tasks, four out of five participants said they liked the morphology task the most. Only one participant, Jee, said she liked the sentence writing task the most. Their sentiments are illustrated below:

> *I liked studying in a group because we could ask each other. I got to know friends from different faculties. I learned vocabulary from another friend to answer the teacher's question. For example, I worked in a pair to write a sentence, which allowed us to share what we thought and organize it to become a sentence.* (Koko)

> *I liked that the teacher gave everyone the chance to answer questions without fear of being wrong, so it enabled me to think without feeing afraid. The teacher guided me when my answer*

> *was wrong, so I could understand it correctly. There were friends to*
>
> *help by looking up words and sharing ideas.* (Pukpik)

On the other hand, the participants explained their dislikes in terms of the classroom atmosphere, their personal ability, and personality. To illustrate, despite ice-breaking activities in the first few sessions, they still felt a bit unfamiliar with the others whom they had not known before. The lesson was new, and they needed time to process it. In the other sessions, one participant felt pressured when the teacher asked questions and no one answered her because they did not know the answer. Another participant disliked herself for not daring to share ideas. One participant did not like it when she could not remember the vocabulary. In terms of tasks, Smile and Koko thought that both guessing meaning from context task and sentence writing task were difficult, as can be seen below.

> *I did not like that I did not share ideas with friends as I should have*
>
> *done whether because of fear of going wrong or whatever. However,*
>
> *studying in a group made me become courageous to share ideas than*
>
> *ever before.* (Jee)

B) Usefulness of DA

All the participants said that they had never studied with DA before; therefore, it was the first time they experienced being simultaneously assessed and taught from where they started to struggle by getting graduated assistance. They agreed that they learned new academic vocabulary that they had not come across before. One participant said it was better than only remembering words because she learned vocabulary by doing the tasks. Another participant said the assistance from friends and the teacher was useful. One participant also said that working in a small group

made him get attention from the teacher and friends that he did not get when he was learning in a large class. He could ask the teacher questions and discuss the answers with friends more. Finally, all agreed that the group helped them do the task which otherwise they would not be able to do alone. The following excerpt reflects the participants' perceived usefulness of DA.

> *We shared knowledge because each of us had different English knowledge. There was something that I knew but the others may not know, or they knew it but I did not. For instance, I could not write a sentence at all, but Jee and Leejen could translate a sentence. It was like we exchanged knowledge and helped each other find the answer faster. Sometimes I could not find the vocabulary, but my friend could.*
> (Smile)

C) Obstacles in DA

The perceived obstacles in DA seemed to come from the participants not daring to ask questions and share their thoughts with the group. In fact, interactions were the key in interactionist DA that allowed the mediator to assess and teach the participants from what they knew. One participant said he was afraid that his asking would make the teacher lose focus on teaching. Moreover, another one even blamed herself for forgetting what she learned easily. Therefore, this obstacle perhaps came from the participants' perceived ability to learn and retain new information as they were beginners, as they described:

> *The answers from the group sometimes met my needs, but sometimes did not. I was still confused but I did not dare asking…because I was*

afraid it would waste the time and the teacher may lose focus on the

contents she was teaching. (Koko)

There was nothing in this learning that was useless. Still, I could not

do something because I forgot it. For example, the teacher taught

something before, but I failed when I did it again. It was not because I

did not understand it, but I forgot it. (Pukpik)

D) Preferences between GDA and individualized DA

The participants stated that they gained different benefits from group dynamic assessment (GDA) and individualized DA. In GDA, they could exchange thoughts and get to know their classmates more. They could ask questions to their classmates and listen to their questions, which helped them understand more. On the other hand, individualized DA allowed them to ask questions about what they did not know directly to the teacher without worrying that it would disturb or waste the others' time. One participant was shy when studying in a group but felt more comfortable when studying individually with the teacher.

E) Recommendation for DA

Generally, the participants had a good impression of the intervention. They said the difficulty level of the contents suited their level of study and gave recommendations for DA. One participant said that she would prefer to have more time for light conversations with everyone as in the first few sessions. Another participant mentioned that he preferred studying through games and activities to conversation-based group learning like DA.

4.2.2 Attitudes Toward Each DA Task

Regarding the attitudes toward each DA task, the data from the students' diaries, which were collected regularly after each group dynamic assessment (GDA) and individualized DA, and the semi-structured interviews were triangulated. The attitudes towards the four DA tasks were gathered task by task, namely the morphology task, the part of speech task, the guessing meaning from context task, and the sentence writing task. Since each task covered one week, which was rather short, the attitudes were described collectively from the regular and transfer tasks of the GDA to the individualized DA.

A. Attitudes Toward the Morphology Task

In the regular task of the GDA, the participants said that separating the root and affixes was easy to understand. A participant mentioned that she had not known that a word could be divided into different parts. Two participants explained that knowing the affixes and roots helped them understand words better. They considered it a new way to remember words. Moreover, since it was the first task, they got to know new classmates whom they were uncomfortable studying with at first but later were relaxed and had fun with because they shared ideas and the word meanings with one another. The problems they experienced were not knowing the word meaning and part of speech. However, they liked that they could look up unknown words and consulted the class materials which helped them understand and follow the task. An example of the participants' attitudes toward the DA morphology task is as follows:

> *This learning helped me know about the roots and affixes. I had not*
>
> *known that the word could be separated. I got a shortcut by knowing*
>
> *the roots and affixes. When I did not know them, I had to look up*

whether the word was an adverb or an adjective, or a noun. However,

when I knew the affix, I knew the word was an adverb, adjective, or

noun, and when it was combined with the root, it became another

word. (Pukpik)

In the transfer task of the GDA, the participants considered the steps of learning easy, but the vocabulary was more difficult. They faced problems in finding the root because they knew little vocabulary. Also, the meanings and parts of words from the same family such as "produce" and "product" were quite confusing for them. Anyway, they learned how to look up the root from an online dictionary. Also, classmates still played a major role in sharing ideas and completing the task, as can be seen below.

Finding the root was more difficult because I knew limited vocabulary.
(Pukpik)

I felt it was difficult to know the root. I had to search for it in a
dictionary. (Smile)

The vocabulary today was more difficult. Some words had three parts
such as inevitably evitable/in/ly. (Leejen)

In the individualized DA, the participants understood the root and affix more and they asked questions. However, some participants mentioned their reading problems. Smile and Leejen stated that they did not know the meaning of the sentence because they did not know the words in the sentence. The had to look up the words to find the meaning that suited context, as of them described in the student's diary:

Actually, I did not know the meaning of all the three sentences. I knew

only some words. However, with the teacher's help and the search for

word meaning, I understood it faster. I worked with trials and errors,

and this helped me know more and gain the courage to continue

reading. I dared to read a long sentence and I could translate it better.

(Leejen)

B. Attitudes Towards the Part of Speech Task

The participants said they learned many things in this task. They learned different parts of speech and the way they were combined into four types of collocations, namely adj-n, v-n, adv-adj, and adv-past participle. Furthermore, they had to pay attention to the sentence structures to select the right collocation as well as consider the collocation's meaning. With high demand for their cognitive processing, two participants, Pukpik and Leejen, said this task was difficult and they somewhat understood it but not thoroughly. One participant, Pukpik, mentioned her unfamiliarity because it was a new task that she just learned, so she could not yet grasp the concept. All participants mentioned friends were helpful in finding the part of speech and word meaning; they were able to complete the task faster than doing it alone. Moreover, they got to know each other more, and they felt more comfortable than in the morphology task. They described:

> *It was the strategy that helped me know which word to put before*
>
> *which word; for example, the word "internal" was an adjective, so it*
>
> *must be followed by a noun like "conflict," but I must consider the*
>
> *sentence structure to know the word order too. Normally I knew only*
>
> *S+V, S+V+O, but this task helped me know more such as an adverb*
>
> *could modify an adjective. ...This strategy helped me choose the words*
>
> *and organize them to match the context.* (Jee)

What I learned today was the part of speech (difficult). I had to search

for both the word's meaning and part of speech. (Leejen)

I learned vocabulary fast. When I could not find some words such as

"comparable," which meant "able to be compared (with)" or

"similar", another friend answered the teacher instead. (Koko)

When it came to the transfer task of the GDA, the participants mentioned that the transfer task helped them understand the sentence structure more in terms of the functions of the part of speech that made words occur together. Furthermore, the fact that the task did not provide the collocation order, unlike the regular task, made them pay more attention to the part of speech. Also, they learned complex sentences with relative clauses from two items in this task. Classmates were helpful in finding the part of speech and sharing their thoughts. However, the participants experienced problems in reading a sentence and understanding the sentence structure which resulted in wrong answers. One participant, Smile, mentioned that she was not confident with the collocation and felt the task was more difficult. Another participant, Koko, mentioned that he spent too much time on a dictionary search for the meaning and part of speech of a word, so he solved the problems by making a guess based on what he had already known instead. Examples are shown below:

The group helped me learn better because we helped one another. For

example, when someone found a part of speech, I helped me know

which word could modify it. (Jee)

Today I could find the part of speech n, v, adj, adv, past participle, but

I still could not read or translate the sentence. (Leejen)

In the individualized DA, the participants liked the explanation that directly met their needs which helped them understand more. Pukpik said that she concentrated better than when studying in group, and Koko said that individualized DA gave him time to ask the teacher questions and he was not shy to ask questions. Nevertheless, they mentioned the persistent problem of reading the sentence and understanding the sentence structure. Jee mentioned a problem of not being able to find the part of speech of some words such as "accessibility." An example can be seen in the student's diary:

> *I still did not understand the sentence structure as it should be, so I used my technique by looking at a word in front of the collocation (e.g., are) whether it was the same as the sentence in the class materials.* (Smile)

C. Attitudes Towards the Guessing Meaning from Context Task

The participants' attitudes toward the regular task of the GDA revealed that three participants, namely, Pukpik, Smile, and Leejen, thought that it was very difficult. Leejen said she could not translate the passage. Smile said she rarely knew the words in the context, which implied that she could not read the passages either. Finally, Pukpik said she could not guess the meaning of the missing word in context because when the mediator gave guidance on the passage's meaning, it sounded complete to her as if nothing was missing. Another participant, Jee, thought that it was challenging because she was not so good at it. Her understanding of the context did not exactly match the correct meaning even though it was close. Moreover, Koko mentioned a problem in understanding the clue type. Nevertheless, the participants thought that the task helped them understand reading the context more and it was a

good practice for them to try guessing the meaning of the missing words which were academic vocabulary that they had not seen before. They also shared the sentiments that classmates were helpful in searching the word's meaning, sharing their understanding from reading, and answering the teacher, so they learned how the others guessed the meaning:

> *Today I read the whole passage and focused on the keyword because I must find the correct choice. I was very difficult. I could not understand the passage, but luckily my friends could do it.* (Leejen)
>
> *I knew more academic words and understood them better because this strategy required the word's meaning to best suit the context and I had to select the best choice.* (Jee)

It is worth noting that all of the participants said they understood the GDA transfer task more than the regular task because the task was not new to them anymore. They understood the clues better. A participant, Jee, said she felt good, enjoyed learning, understood the strategy, and talked to classmates in the group more. They liked that the group helped one another obtain the word's meaning, read the passage, share ideas, and ask the teacher questions. The problems they encountered were similar to those in the regular task including limited vocabulary obstructing the passage comprehension, inability to read, not understanding the clue and sentence structure, and wrong translation of the passage. The following excerpts show the participants' attitudes toward the GDA transfer task:

> *I felt that I understood more than yesterday because I got a new trick; an item used the words with same meaning such as "basic" and "fundamental."* (Pukpik)

Friends helped me do the task better and faster because we shared

ideas in the group more. For instance, when a friend knew the context

meaning, it helped me find the word that matched the context faster. (Jee)

Regarding the individualized DA, two participants, Pukpik and Smile, said that it forced them to think by themselves more without fear of being wrong. Jee said she understood the strategy more and chose the word to fit the context better. Koko stated that he learned words better in the individualized DA than in a group. He could ask the teacher to clarify his word confusion. The mediator, who was also the teacher, played a major part in explaining the passage, the clue, and their misconceptions, as they described in their diary:

I understood more because the teacher helped explain the clue and the

sentence meaning. (Smile)

I learned vocabulary more than when I learned in the group. In a

group, I may not know some words, or I was confused of the spelling of

different words. I learned them in the individualized DA. (Koko)

D. Attitudes Towards the Sentence Writing Task

In the GDA regular task, the participants realized the benefits of the task that it made them learn the target words by writing sentences to incorporate them. They learned using different parts of speech in writing. They had fun sharing ideas with friends by writing in a pair and showing it to the group. However, the participants said they could not use grammar well although their sentences were comprehensible. The grammar sometimes made their sentences ambiguous. One participant, Leejen, thought sentence writing was difficult but luckily, she paired with Jee, who could do it. Lastly, Koko still had a persistent problem with spelling since he misspelled a word

when he noted it in his diary. The participants' attitudes toward the sentence writing task are shown below:

> *This task improved my sentence writing. I put words in the right place more because we helped each other and exchanged ideas in a group.* (Jee)

> *I got the strategy to see the sentence structure… to use (n) (v) (adv) (adj). For example, "the *docmentary (Koko's misspelling) ended too" must be followed by "quickly."* (Koko)

In the transfer task, the participants said they learned new words and understood grammar and sentence structure more. They remembered words when they were writing a sentence. Their peers, who wrote the sentence together, made learning more enjoyable because they helped each other find vocabulary for the sentence. Nevertheless, the participants addressed their problems with wrong grammar such as tenses and sentence structures. Moreover, Leejen who was quiet throughout the group's sentence checking said that writing a sentence was still very difficult for her. She only thought of a sentence in Thai and then searched for vocabulary to translate it. Koko still misspelled words when he noted in his diary although he knew the correct spelling of the words. They explained:

> *I learned new words and created a sentence for them. In the past, I hardly knew grammar nor wrote a sentence. I made a mistake today, too, but I understood more from the teacher's explanation.* (Smile)

> *The dynamic assessment helped me understand the sentence and translate it better. I knew the flaw in the sentence when friends shared their opinions to make it better.* (Jee)

In the individualized DA, there was a change in the participants' attitudes since they had to write sentences on their own without paring up with classmates. They liked that they could ask a question to the teacher, who was also the mediator, in real time. Jee said studying individualized DA helped her understand words better than GDA, while Smile said writing a sentence helped her understand the words more. Finally, Leejen said writing a sentence was either easy or difficult. She knew that she was worried too much at first and felt ashamed. The participants still faced the same problems of grammar and sentence structure, as illustrated below.

> *The individualized DA helped me think of and write a sentence by myself without a friend to help. It made me understand more.* (Pukpik)
>
> *The sentence writing for me was…it was like I thought too much that I must put this word here that word there but actually it was like Thai language. I did not know why I thought too much.* (Leejen)

CHAPTER V
DISCUSSION AND CONCLUSION

This chapter includes six parts: a summary of the study, a summary of the findings, a discussion of the findings, implications of the findings, limitations of the study, and recommendations for future research.

5.1 Summary of the Study

The present study investigated 1) the effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge and 2) the students' attitudes toward the use of the DA model. This study adopted a one-group, mixed-method, case study research design with the main focus on qualitative methodology. The participants consisted of five second-year university students who retook the basic English foundation course in the summer semester of their first year. They were recruited by means of two vocabulary screening instruments. The experiment took eight weeks, while the intervention took four weeks as intensive tutorials outside the participants' regular class time. In each week, there were two sessions of group dynamic assessment (GDA) for a regular task and a transfer task, and one individualized DA session. The four vocabulary strategies employed were analyzing affixes and roots, analyzing part of speech, guessing meaning from context, and using a new word to form a sentence.

Before the intervention, the participants answered the demographic questionnaire and took the pretest. During the intervention, the GDA and individualized DA sessions were recorded, and verbal reports were used to ask the participants to clarify their thoughts. After each session ended, the researcher wrote a field note, and the participants wrote a student's diary. After the intervention, the

participants took an immediate posttest, filled out an attitude questionnaire, participated in a group semi-structured interview, and took a delayed posttest.

To answer Research Question 1, quantitative data from test scores were analyzed using descriptive statistics, and qualitative data from the recordings from DA sessions, verbal reports, researcher's field notes, and students' diaries were analyzed by thematic analysis. To answer Research Question 2, quantitative data from the attitude questionnaire were analyzed by means of descriptive statistics, and qualitative data from the semi-structured interview and students' diaries were analyzed with thematic analysis.

5.2 Summary of the Findings

The findings of Research Question 1: What are the effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge?

The quantitative data from the tests revealed that the overall raw scores increased from the pretest to the immediate posttest and either dropped, remained steady, or slightly rose from the immediate posttest by the time students took the delayed posttest. However, all the scores were less than half of the total score of 32, and the increase from the overall pretest scores to the overall immediate posttest scores was not evidenced in the guessing meaning from context section.

The qualitative data of the main findings among the four tasks revealed that implicit mediation prompts could help the participants complete the morphology and part of speech task. In contrast, explicit mediation was needed for the guessing meaning from context task and sentence writing task. The participants achieved some vocabulary constructs, particularly the form and meaning, but not all constructs.

Moreover, other forms of assistance were employed because many problems were found including reading at a sentence level, grammar, word confusion, spelling, pronunciation, and addiction to translation tools. The interaction in DA that stimulated them to try before receiving graduated assistance helped the mediator discover the underlying problems. Lastly, each participant learned from group dynamic assessment (GDA) to varying extents.

In addition, the effects of the DA model were summarized by task as follows:

- Morphology task: The participants could mostly indicate the roots and affixes of

transparent derivatives in the regular task, but they mostly could not identify the roots of complex derivatives in the transfer task. The mediator guided them to use dictionaries and class materials for the roots and parts of speech.

- Part of speech task: With the help from the dictionary to find the part of speech, the

participants mostly matched correct collocations in the regular task but not in the transfer task. However, most of them did not understand how the collocations related syntactically to the sentence structure. Some of them used inappropriate strategies to arrive at the answers.

- Guessing meaning from context task: This task proved to be the most difficult because the

participants could not read the 50-word passage in the regular task although the words were in the first 1000 word family level, and they had to look up the meaning of many words in the transfer task. The mediator had to help them with explicit mediation to read at the word and phrase levels.

- Sentence writing task: The participants could write sentences to convey the word meaning

but they generally could not use the words' parts of speech correctly especially the adjective, adverb, and verb. The DA mediation was used to correct the grammar, and the explicit stages of explaining how to correct the error and providing the correct form were employed the most.

The findings of Research Question 2: What are students' attitudes toward the use of the dynamic assessment model on English academic vocabulary knowledge?

According to the findings, the participants thought that DA enhanced their English academic vocabulary knowledge although the vocabulary was new and challenging for them. Furthermore, the assistance from peers and the mediator was useful to complete the tasks. The mediator could assess their ability to learn academic vocabulary correctly. However, different personalities affected their interaction in the group. For example, one participant was not confident to share ideas, and one preferred to listen to others rather than share ideas to avoid disagreement and to not interrupt the mediator. Another point worth mentioning was that some participants were disappointed about their forgetfulness of things they had learned and one participant felt that his learning was behind that of the others. Finally, their preferences and perceived difficulty of each task were different.

5.3 Discussion of the Findings

This section presents the discussion of the findings following the research objectives. It includes the discussion of 1) effects of the dynamic assessment model on low proficiency students' English academic vocabulary knowledge and 2)

students' attitudes toward the use of the dynamic assessment model on English academic vocabulary knowledge.

5.3.1 Effects of the Dynamic Assessment Model on Low Proficiency Students' English Academic Vocabulary Knowledge

The findings showed that the participants' overall test scores increased slightly from the pretest to the immediate posttest, but the delayed posttest scores varied. To explain further, each test score was much lower than the total score of 32. Given that the intensive intervention lasted four weeks, the present study could not make a definite conclusion on the effects of the DA model based on the test scores. Furthermore, Pecorari et al. (2019) point out that items on a vocabulary test are independent, and they assess knowledge of different words. In this study, it might have been too ambitious to expect the participants to gain knowledge of all the taught academic words in such a short time. When the scores of each section were examined separately, it could be seen that there was a rise and fall of the scores in the morphology section, part of speech section, and sentence writing section although they could not be compared because each section was designed and scored differently. However, the scores in the guessing meaning from context section did not indicate any improvement. This might have resulted from the students' low reading ability since the test was embedded in a larger construct of reading comprehension according to Read's (2000) analysis of vocabulary assessment in a discrete-embedded continuum. Another possible explanation might be the test design. The present study selected words that the participants had come across in the other tasks to be tested to avoid the participants only remembering the words from the guessing meaning from context task to answer. However, the participants may not have remembered the

meaning of the tested words which made the results opposite to those reported by Ebadi et al. (2018a) and Ebadi et al. (2018b) who used the same words for the task and the tests. Another reason could be that some participants' mastery of general vocabulary was still lower than the first 1,000 word family. Therefore, inadequate vocabulary did not support reading (Hacquebord & Stellingwerf, 2007).

The commonly occurring themes regarding DA in all the four tasks were related to the applicability of mediation stages, the achievement of vocabulary constructs, the other forms of assistance to supplement DA, the interaction with low proficiency students in DA, and the unequal learning gain from GDA, all of which are discussed as follows.

- Applicability of mediation stages

According to Lantolf and Poehner (2010), the mediation offered at a particular moment depends on the learner's or group's ZPD. In this study, the fact that implicit mediation was enough to help the participants arrive at the answers in the morphology task and the part of speech task reflected their level of control of language at the word level. Moreover, the control of their language learning at the sentence and short passage level was low because the mediator had to use explicit mediation in the guessing meaning from context task and sentence writing task to help them understand the words. However, from the DA perspective, learners' performance helps the mediator understand their abilities and focus on the process of bringing development (Lantolf & Poehner, 2010).

- Achievement of vocabulary constructs

Based on the findings, the fact that DA mediation could promote the achievement of the form and meaning construct may be due to the natural process of

L2 acquisition that usually starts by matching the new L2 words with the existing L1 meaning (Pavičić Takač, 2008). However, the nonachievement of the grammatical functions (the receptive and productive pattern in which the word occurs), the construct of collocations (the use of other words with the target word), and the concept and referents (the concept inferred from reading the context) was possibly due to their limited knowledge of grammar, sentence structure, and reading.

- Other forms of assistance to supplement DA

The findings that other forms of assistance were used along DA corresponded with a study undertaken by Davin (2013) in which the mediator used the instruction conversation (IC) framework together with DA, because the DA prompts alone could not handle the students' errors and questions. The IC framework included several forms of assistance such as modeling the language, questioning, explaining, and specifying a correct response (Tharp & Gallimore, 1991). In this study, it was found that the mediator could not solve all conceptual errors of low proficiency students by merely giving implicit to explicit mediation gradually because there were many errors, and sometimes direct explanation was necessary for grammar. The flexibility in using DA mediation agreed with the findings of Davin, Herazo, and Sagre (2017) that mediators needed flexibility in giving prompts.

- Interaction with low proficiency students in DA

The findings of the present study that interaction in DA helped the mediator know the participants' cognitive processes and underlying problems were congruent with Teo (2012a) which also discovered the students' process of thinking, difficulty, and confusion. Moreover, the participants' responses also reflected on the task design

for further improvement which agreed with Teo (2012a) because the students' responses reflected some overlooked technical problems.

In addition, the interaction of low proficiency students during that task shed light on the mood and tone of a mediator, besides the benefit of the mediator's presence to help students interact and think through the problems as proposed by Poehner (2007) and Aljaafreh and Lantolf (1994).

- Unequal learning gain from GDA

The findings of the present study that GDA was feasible with university students agreed with Bakhoda and Shabani (2019) and Fani and Rashtchi (2015) who employed it with reading comprehension. However, both studies also showed that individual ZPDs existed. To illustrate, the mediator in Bakhoda and Shabani (2019) coordinated with group's ZPD and individual ZPDs simultaneously. Fani and Rashtchi (2015) also found that the students who studied through individualized DA scored higher than those who studied through concurrent GDA and cumulative GDA. Thus, the findings of the present study confirmed different individual ZPDs, and it was in line with Rahimi et al. (2015) who mentioned that learners' different ZPDs probably came from their varying actual knowledge. Therefore, the present study proposed that the realization of a group's ZPD occurred only when the group did the task together, but how much each student gained from the group depended on their individual ZPDs.

Moreover, evidence of language development specific to each of the four tasks was also found, namely the morphology task, the part of speech task, the guessing meaning from context task, and the sentence writing task. The discussion is presented as follows.

A. Morphology Task

The qualitative data from the morphology tasks of the GDA regular and transfer tasks revealed remarkably different results due to the properties of the target words. In the regular task that contained transparent derivatives, the participants, who were beginners and had small vocabulary sizes, generally could separate the word parts and identify the root and affix quite well except for some words including critical, restriction, and sustainable which caused them misunderstanding about the word parts. This could be explained by two reasons. First, based on the participants' limited vocabulary, these words, especially restriction, possibly appeared to contain deceptive morphological transparency which made them prone to be separable into possible but deceptive meaningful morphemes (Laufer, 2001) such as "re," "stric," and "tion." Second, the participants may not have remembered the affix forms that they had learned shortly before doing the group dynamic assessment (GDA). Additionally, the semi-structured interview revealed later that four out of five participants did not have any background knowledge of morphology; in other words, they did not know that words could be separated. Only one participant, Jee, had heard of prefixes and suffixes before but was unsure what they were. Thus, studying the lists of prefixes and suffixes was new to them, and the participants probably had to take more time to internalize the derivational affixes. The results tended to agree with Milton (2009) who mentions that derivational affixes are less frequent and leaned rather late, and with Gardner (2007) and Nippold and Sun (2008) who point out that second language adult learners and schoolers learn derivational affixes much later than inflectional affixes that carry grammatical functions. Specifically, the findings agreed with Varatharajoo (2016) who conducted research with low proficiency

students and found that they learned derivational morphemes the least compared to inflectional morphemes and compound words respectively. Regarding the transfer task with complex derivatives, the results showed that the participants knew the number of word parts and could separate the affixes. However, they could hardly identify the roots which may be due to their limited existing vocabulary that yielded no clue to trace the roots. This may explain why sometimes they could not select the root although they saw the options in the word family shown in the English-English dictionary that the mediator introduced. The findings supported Milton's (2009) suggestion that a large vocabulary size may be necessary for students to master complex word parts. In addition, finding the roots of derivatives whose orthographic forms are different from their original roots is challenging for them. This fact corresponded with Laufer (2001) mentioning that synoforms with different suffixes induce the most difficulty in learning among all the synoforms, or words that share similar characteristics.

In terms of DA mediation stages, the mediation given on the word level demonstrated that DA could assess the participants' ability to recognize the word parts of the transparent and complex derivatives, and each was achieved to a different extent as mentioned above. Knowing the meaning and part of speech was beyond their ability and they needed help from the mediator, class materials, and dictionaries. However, giving the mediation in the sentence level where the target word was in context proved to be problematic, and graduated mediation from implicit to explicit following the DA principle was rather impossible as the participants had much difficulty reading.

Although the design of the morphology task followed Laufer's (2001) suggestion that interpreting the meaning of word morphology should rely on the wider context, the findings cautioned that understanding the contextual sentence might be a challenge for low proficiency students, and considerable help was required to help them read and look up words properly. One reason could be that the contextual sentences still consisted of unknown words even though they were selected from English-English dictionaries with careful screening of the least seem-to-be unknown words possible. Since generally learners figure out the meaning of an unknown word from a known word (Sasao & Webb, 2017), there always seem to be unknown words that low proficiency students with limited vocabulary have to look up its meaning.

Unfortunately, four out of five participants habitually used translation tools, so the mediator had to introduce dictionaries and explain how to use them properly. In fact, most participants had not been trained on how to use a dictionary, which was a skill needed in vocabulary teaching and learning, as proposed by Nation (2011) and Watts (1995). Many times, the assistance from the mediator must be as explicit as choosing the meaning and part of speech from the results that appeared in an online dictionary. According to Hunt and Beglar (2002), learners should clearly understand the context so that they will be able to correctly select the sense of a word from a dictionary. Also, a lack of reading and dictionary skills adds challenges to each other and to low proficiency students because they do not have both skills. In summary, despite the intention to let the participants control their learning as much as possible and to provide the least assistance and only when they struggled as DA suggested (Aljaafreh & Lantolf, 1994; Infante & Poehner, 2019), reading the context, using a

dictionary, and selecting suitable information required direct explanation for low proficiency students.

The findings of individualized DA also illustrated different learning gains of each participant which resulted in a call to fulfill the deficient group dynamic assessment (GDA) literature (Poehner, 2014). For example, some participants, Leejen and Koko, could only separate the suffixes and leave the rest of the words to be the roots. Pukpik sensed that an alphabet must be added to the root of a complex derivative although she did not know what it was. Smile and Pukpik also noticed that merely separating what seemed to be a prefix would leave the rest to be ill-formed. However, the morphology task likely had slight positive effects on the participants' vocabulary knowledge as shown in their increased immediate posttest and delayed posttest scores. The positive effects of using DA and morphological analysis agreed with the findings of Hamavandi, Rezai, and Mazdayasna (2017) who used the Dynamic Assessment Task of Morphological Awareness (DATMA) to improve and predict reading comprehension of immediate-level students. In summary, due to the participants' performances in the morphology task and its constructs selected from Nation (2011), it may be said that the participants generally achieved the construct of word parts because they could mostly recognize them except for complex derivatives and parts of speech that they needed help from dictionaries and class materials. Nonetheless, they needed a great deal of assistance from the mediator to achieve the constructs of form and meaning as well as concept and referents, because selecting the suitable word from a dictionary and reading to understand a context were still challenging for them.

B. Part of Speech Task

The qualitative data during the part of speech task unveiled the underlying problems of low proficiency students. Even though they could select the right parts of speech to form collocations, the participants had difficulties in reading and analyzing syntax. Most of them could not read the contextual sentence by themselves, and the individualized DA revealed that the mediator needed to help some participants read every word. This could be explained that the participants did not know the meaning and part of speech of the words, so they could not analyze the sentence structure even though they remembered a basic structure of S+V+O representing a subject, a verb, and an object. Moreover, although they had studied suffixes in the morphology task a week before, they possibly had not remembered the forms and parts of speech that the suffixes entailed because the intervention was too short. Moreover, Jiang (2004) and Qian (2002) explain that syntax is part of the depth of vocabulary knowledge that includes many things such as collocation, morphemes, and semantics. The depth of vocabulary knowledge specifies word characteristics compared to the breadth that identifies the meaning. Low proficiency students may require a longer time and practice to understand syntax, which seems complex for them. In addition, the word forms probably inherit challenges for low proficiency to understand. For instance, Peters (2020) contends that verbs have many forms because of tenses, number (a singular or plural noun), and person (first, second, or third person). They are more abstract than nouns because they are relational and consist of exceptions. Therefore, to understand the verb meaning, learners should understand syntagmatic relationships and contextual clues. Likewise, the meaning of an adjective is relational because it is particular to the modified noun, and adjectives also have varied forms. As a result,

low proficiency students, who also have limited cognitive processing ability and grammatical knowledge, may have difficulty distinguishing forms and grammatical functions when they do it alone in the static test and even with the mediator.

The participants' performance in the GDA regular and transfer tasks of the part of speech task showed that they needed only implicit mediation, which signaled the existence of error, to choose the correct collocations. However, their performance might have misled the mediator that they understood the grammatical functions of the collocations that were related to the sentence structure. Nevertheless, the individualized DA revealed that the participants matched the collocations correctly by following the four collocation types that were taught, but they did not understand how their grammatical functions worked in the sentence structure. The results regarding the number of employed prompts aligned with the idea of Davin (2016) in that it could not assert the students' understanding and self-regulation of the language. Davin (2016) found that a 5th-grade student created a kind of Spanish question using a slot-filler syntactic template without the mediator's prompts to guide him, but he could not create other kinds of questions. Thus, it could be compared to the present study that the participants could match the collocation by following the pattern of the collocation types but could not give reasons beyond the collocation types to the sentence structure. In addition, the findings that fewer mediation prompts were taken did not guarantee the group's learning gain contradicted Bakoda and Shabani (2019) who used interactionist concurrent GDA to supplement computerized GDA. A human mediator guided intermediate students aged 19 to 24 years old to read the reading texts programmed in computerized GDA. When there were wrong answers in the group, the mediator asked students to explain their reasons and choose another answer

again until no one got the wrong answer. The group later relied on fewer computerized prompts in the other reading texts and that made the researcher conclude that the group's ZPD was enhanced. Thus, the present study found contrastive results that could add to the GDA literature.

The individualized DA exposed the different learning gains from GDA. It showed that the participant, Jee, who had the highest English proficiency, displayed decent understanding and did the best among all the participants whereas the others employed unsuitable strategies. In addition, a participant, Leejen, seemed to not have learned from the GDA at all because she selected the first word of the collocation from short orthography and the second word from long orthography. A special case of less responsive students was mentioned in Davin (2016) when classroom DA and small-group work seemed to bear no effect on two students and other treatment might be necessary. Moreover, two participants, Smile and Koko, employed improper strategies to arrive at the answers. They compared the sample sentences in the class materials with the sentences in the task and looked for the same words that appeared in both sources before the collocation such as "are" and "the." Besides the inadequacy in their learning, their performance gave a critical caution of reducing the amount of class materials or tools to help the participants. In this study, the availability of class materials may have prevented them from using their knowledge first, which unintentionally violated the DA principle that assistance must be graduated from implicit to explicit and contingent to the students' need; that is, when they began to struggle (Infante & Poehner, 2019). In conclusion, the participants reached only the form and meaning construct, not the grammatical functions construct, and the understanding tended to be limited to the word level as it did not reach the sentence

structure. The findings also pointed out that the individuals' ZPD varied when the group's ZPD seemed predictable. They might contribute to the scarce literature on GDA called by Poehner (2014) and to the literature on individual vocabulary learning called by Milton (2009).

C. Guessing Meaning from Context Task

The qualitative data from the task revealed that most participants needed the most explicit mediation to the word and phrase levels and searched words in a dictionary to comprehend the passage composed of the 1st 1000 word family level. This implied that the task might be far from their zone of proximal development (ZPD). In addition, the task seems to bear the least successful results of DA among the four tasks of the intervention. There were several reasons which may help explain the results. First, the participants knew very limited vocabulary as some of them did not master the first 1000 word family level due to their scores from Level 1 of the New Vocabulary Levels Test (NVLT) in the screening test. Hacquebord and Stellingwerf (2007) explain that a deficit in vocabulary and reading problems have reciprocal relationships. Thus, learners who know little vocabulary cannot read well and become frozen readers. Likewise, Shahar-Yames and Prior (2018) found that reading accuracy or decoding and reading comprehension were the most contributive factors to lexical inferencing skill among minority and native-speaking higher elementary school students. Therefore, the inadequate existing vocabulary and reading skills tended to cause difficulty for low proficiency students to guess the meaning ineffectively (Acosta, 2019; Gu, 2003).

Furthermore, in this study, although the context was designed to yield 98% text coverage to enable the participants to guess the meaning of the missing word

correctly, there were still words that the participants had to look up in a dictionary. This agreed with what Tian and Macaro (2012) point out that it was impossible for the instructor to know every word that the students knew or did not know. Thus, the results of this study might suggest that the instructor needs to be more patient with the unfortunate situation when what seems to be easy words such as "other" can really be unknown words for low proficiency students. Second, the participants in this study did not know basic grammar such as "apostrophe s," "ed" inflected form of verbs, a possessive pronoun "their," and misunderstood the message. For example, they did know the function of an "apostrophe s" in the sentence "this is Jim's house." Some thought the "apostrophe s" meant the quantity, or was a linking verb, a plural marking, and the verb "is," and the sentence meant "this is my house" or "he is at home." Third, they lacked syntactical knowledge to understand a phrase or a sentence. For instance, they did not know that a noun phrase, in which the head noun is placed at the end, must be comprehended from the back to the front. They comprehended it from the front to the back. Fourth, they may not have remembered the clues that they studied before doing the GDA regular task; for example, they did not know the word "or" as a description clue. Thus, reading a 50-60 word passage was too challenging for them to do alone, and the mediator had to explain everything to the very smallest details. The results from this study tended to provide evidence to support Sasao (2013) saying that students mostly used the guessing meaning from context strategy, but their guesses were often wrong.

Moreover, the participants' background knowledge was useful but rarely led them to clearly understand the passage. In particular, when the word confusion misled the use of background knowledge, their comprehension could digress quite

considerably. Examples of an extreme case were Koko's misunderstanding of "instead" to be "inside," "act" to "art," "transition" to "translation," and "judgment" to "jump man" and "just dance." Such word confusion made him unable to comprehend the passage and choose the wrong answers. For example, Koko knew that the sentence "the music from well-known movies, especially those with good feelings, can act on a person's about whether the movie is good or not" was about music, so he quickly chose the answer "transition" because he thought it was "translation" that could link to translating song lyrics.

The findings were contradictory to the findings reported by Shahar-Yames and Prior (2018) who found that the students in the Russian-speaking minority students (LM) group used non-verbal inferencing ability (general inferencing ability) to compensate for their inferior vocabulary than the native Hebrew-speaking peers (NH) group. However, the LM in Shahar-Yames and Prior (2018) had been immersed in L2 societal language for years and this might have given them the advantages of language familiarity and larger L2 vocabulary size than the participants in this study. According to Shahar-Yames and Prior (2018), the vocabulary in the texts must be under the vocabulary threshold level of the LM group so they could comprehend the texts. Nonetheless, this study found that easy vocabulary may not be enough for text comprehension because there were other important skills such as grammar and reading needed to comprehend the text. In fact, Nagy (2001) proposed the skills that enabled guessing meaning from context or contextual inferencing including linguistic knowledge, world knowledge, and strategic knowledge. The linguistic knowledge encompassed syntactic knowledge, word schemas, and vocabulary knowledge. As a result, this study revealed that it may be hard to use DA as metacognitive mediation to

help the participants stretch their actual knowledge when they had weak linguistic knowledge. This is because DA helps learners extend what they have learned but not fully developed to the next or proximal development (Poehner, 2014).

The results of the present study were also incongruent with a previous study carried out by Teo (2012a) which found that low- and high-intermediate students improved their guessing meaning from context skills after DA intervention. It might be because the students' proficiency levels in Teo's (2012a) research were higher than those of the participants in this study. Also, Teo's research focused on reading through all four weeks with individualized DA, so the students practiced more and received mediation directly to meet each one's needs. In contrast, the participants in the present study practiced guessing meaning from context in only one week with two GDA sessions and one individualized DA session.

However, this study would like to raise hope when teaching low proficiency students with a small positive result that the participants could give acceptable meaning for the answer although it was not intended for the context and the mediator helped them to the word level. Examples of their acceptable answers included "consider" for "evaluate," "skill" for "efficiency," and "problem" and "difficulty" for "constraint." The appreciation of their reasoning ability followed Davin and Donato's (2013) positive view due to the DA principle that learners' inability to regulate their learning to perform independently is not equal to the lack of development, but it urges other forms of support for these learners. Moreover, Nation (2011) has suggested that learners should get credit even though their guesses are not totally correct because their attempt helps build the word meaning and is part of a cumulative process of learning. In conclusion, it may be concluded that the participants in this study hardly

achieved the task constructs, namely the receptive concept and referent (meaning) and the form and meaning (meaning) which called for further intervention to find better ways to help them.

D. Sentence Writing Task

The qualitative data of the sentence writing tasks demonstrated that the participants were able to use the meaning of the academic words to form sentences but sometimes they did not understand the words' grammatical functions. Also, they were unable to use other words in the sentences with the academic words correctly, so their sentences were usually grammatically ill-formed. According to the task constructs selected from the constructs of vocabulary knowledge of form, meaning, and use areas defied by Nation (2011), it may be concluded that the participants reached the concept and referent construct (meaning), but they did not reach the grammatical functions (use) and the collocations construct (use), and all these constructs were for productive word learning. There were reasons to support the participants to understand and use the academic words easily. Jiang (2004) explains that vocabulary acquisition starts with the word meaning. Jiang (2004) and Nation (2011) also agree that adults learning L2 words rely on L1 to understand them. Therefore, it was understandable why the participants in this study, who were regarded as adults, understood and applied the word meaning to the sentence easily despite their low proficiency. Nonetheless, there was a time when a participant did not understand the word "incorporate" because he relied only on the provided Thai meaning but did not read the English definition. The word "incorporate" may be an example that violates the equivalent hypothesis mentioned by Swan (2001) who points out that the matching between L1 and L2 words might fail because they are not

exact equivalents and make students misunderstand the L2 semantic properties. To solve this problem, Jiang (2004) proposes that learners should learn to develop the concept specifically for L2 and reconstruct L1 meaning. In this study, after the participant realized his misunderstanding, he formed another sentence to match the L2 concept immediately, which implied that developing the L2 concept was easily attainable.

In contrast, the participants rarely reached the grammatical functions construct of the academic words, and they usually needed the most explicit mediation in which the mediator provided the correct form/sentence structures and its explanation, especially for the adjective, adverb, and verb. The participants were unable to position the adjective and adverb because they had not fully understood their places in sentences from the learning before the GDA regular task. Furthermore, the results from the part of speech task, which was the second task of this intervention, showed that the participants still did not know how part of speech functioned in a sentence. Therefore, using the word's grammatical function that required syntactical knowledge was difficult for them, and they mostly could not achieve it. In addition, using a word's grammatical function to form the sentence was counted as productive word learning. Nation (2011) maintains that productive word learning is usually harder than learning receptive words. The findings of the present study corresponded with Stubbed and Nakashima (2017) who found that Japanese freshmen of the higher-beginner level sometimes wrote incorrect sentences incorporating the target word even though they correctly translated the word meaning. They further asserted that the students' written sentences did not usually portray the actual word meanings.

The participants also did not achieve the collocations construct which targeted the other words or types of words used with the academic words. Their words sometimes obscured the meaning of sentences and normally were ungrammatical. When they were asked to fix errors in their sentences, they could only fix small errors such as adding "s" for a plural noun, adding a conjunction "and," and solving the misspelling which reflected that their grammatical knowledge was weak. They could not propose ideas to solve adverbs, adjectives, verb tenses, and overall sentences and needed explicit mediation of correct forms and explanations. The need for explicit mediation agreed with Mirzaei et al. (2017) when they mediated with the students to fix errors in the sentences that they translated from Persian to English and used the taught English words. The researchers used cumulative GDA in which the mediator used mediation prompts with one student at a time. It was found that the first interactant, or the first student who was mediated, needed explicit mediation but the second interactant, who observed the first interactant, needed only implicit mediation which made the researcher claim that learning had actually taken place. However, the results of the present study were different those of Mirzaei et al. (2017) because the participants needed explicit mediation to help them solve the errors in their sentences in GDA and individualized DA. Additionally, when there were many errors, they also dispersed the mediator's focus on which error to apply DA because in fact DA serves as metacognitive mediation to help learners stretch what they partly know but have not securely established (Miller, 2011). Consequently, the mediator had no clue of the grammar that the participants had learned.

5.3.2 Students' Attitudes Toward DA

The results from the attitude questionnaire, the semi-structured interview, and the students' diaries revealed that the participants had mostly positive attitudes toward the overall intervention. They liked the assistance from the mediator/instructor and their peers in group dynamic assessment (GDA). The preference for working with peers agreed with Brown's (2014) suggestion to use group and pair activities for beginners. The benefit of the mediator's assistance corresponded with Poehner's (2007) research that found the value of the mediator's presence to prompt learners to think through to solve a problem. Also, Aljaafreh and Lantolf (1994, p. 471) explain that the mediator's presence forms a "collaborative posture" which makes learners know that they could interact, and such presence could provide a mediational function. In this study, it could be seen that peer assistance was highly beneficial in the group dynamic assessment (GDA) in every task because the participants helped one another complete the tasks that they would not be able to do alone. The group members supported one another cognitively and emotionally while learning, creating some joyful moments and laughter. The benefit of peer assistance aligned with Mazzotta and Belcher's (2018) research which reports that emotional and social factors can expand or narrow learners' ZPD. A supportive atmosphere was also found in GDA since the participants could answer questions without fear and had the mediator guiding them. The supportive atmosphere was consistent with the findings of Mazzotta and Belcher (2018) of its usefulness to support learning.

It is worth noting that in this study some of the participants felt uneasy when studying with GDA. For example, a participant named Koko felt that he was behind the others, and learning in a group felt like learning in a large class which made him

afraid to speak up in a group. This suggested that an individual's personality matters when they participate in a group. According to Poehner (2009), when looking at group cohesiveness and individuals' relations, the assembly of a group in this study was temporary for the GDA, not a permanent trait. This was because of its nature as a short tutorial session out of regular class time, and the students studied together only for four weeks. Therefore, it was possible that the light group cohesiveness could not make Koko feel comfortable enough to speak in a small group. A participant, Jee, also mentioned that if there had been more time, there should have been more light conversations among the group members. Furthermore, some students disliked the environment when the group could not answer the mediator's questions, which made them feel uncomfortable. Disappointment in themselves was also found because of their forgetfulness, limited English proficiency, and personal past learning experiences that made some avoid sharing ideas with others. Moreover, the avoidance of asking questions might have stemmed from the culture they lived in as a student explained that he did not want to interrupt the instructor while teaching as it could be seen as disrespectful. Tran (2013) points out that some Asian students do not want to ask to interrupt the instructor as they view quietness appropriate for the classroom environment, and Van Schalkwyk (2015) agrees that Asian students tend to avoid conversations that lead to disagreements. It might imply that the Thai culture in which GDA was conducted in this study might have influenced the students' behaviors.

In addition, the findings from the students' diaries and the semi-structured interview revealed diverse attitudes of the participants toward each task. Four out of five participants said they liked the morphology task the most because they considered it the easiest while a participant, Jee, whose English proficiency was the

highest among the group, said she liked the sentence writing task the most. As the sentence writing task is a productive task and is deemed more difficult than a receptive one (Nation, 2011), the task preference might unveil different kinds of learners' attitudes. According to a goal orientation theory by Dweck and Leggett (1988), Jee may be considered a mastery-oriented student because she enjoyed challenging tasks including the part of speech task and the guessing meaning from context task and often mentioned the takeaways of each task to improve her learning. Although Jee was not at an advanced level, her attitude tended to match with Schmitt's (1997) findings that advanced learners value the part of speech as a useful vocabulary strategy. In contrast, when the subsequent tasks became more challenging including the part of speech task, the guessing meaning from context task, and the sentence writing task, the other participants expressed their worries about their abilities. For instance, Pukpik blamed her forgetfulness on what she had already learned. Smile said she could not even remember the present, past, and past participle verb forms, while Leejen said all these three tasks were difficult. Also, Koko said he tried learning English, but he still could not understand it. These attitudes they had toward themselves likely reflected a performance goal-orientation that students perceived their low abilities as irreparable, tended to avoid challenging tasks, and sought easier ways to complete them (Dweck & Leggett, 1988). However, a change in attitude was observed in a participant, Leejen, who at first thought that the sentence writing task was too difficult for her. After doing individualized DA and receiving mediation on her writing, she stopped being overanxious and thought that it was neither difficult nor easy. Leejen's case may be an example of how individual factors could interact with the feedback. According to Jang and Wanger (2014), learners use

their beliefs and goal orientation to interpret the feedback, and their feedback evaluation could in turn change their perception of learning. This implied that the personalized DA mediation given in individualized DA possibly has the potential to build a positive attitude in learners. Another thing worth mentioning is that the unfamiliarity of the weekly new vocabulary learning strategy might have made the tasks seem difficult. Therefore, even though the regular task was designed to be easy, the fact that it was newly introduced made it automatically challenging for low proficiency students to cope with. This might explain why some participants said they understood the vocabulary better in the transfer task although it was designed to add challenges.

5.4 Implications of the Findings

The findings of the present study revealed that the DA model could help low proficiency students use vocabulary learning strategies to learn academic vocabulary to a certain extent, and the students' performances varied from task to task. In fact, the findings very much exposed the underlying difficulties of low proficiency students who may have had more challenges to learn academic vocabulary. Based on the findings of this study, the following implications should be taken into consideration if ones wish to implement DA with low proficiency students.

First, teachers should make sure that students have necessary linguistic knowledge before using DA; otherwise, they will not be able to comprehend the lessons and the implementation of DA will not be successful. This includes making sure that students have necessary reading skills including reading contextual sentences, syntactic knowledge, and grammatical knowledge that are necessary for them to perform DA tasks to learn new vocabulary. Besides this, teachers should

ensure that students are able to use a dictionary to aid their vocabulary acquisition and recommend them which dictionaries they should use. This is because students with a low level of English proficiency may have a different zone of actual development which makes it necessary for teachers to put extra efforts into preparation so as to help them reach their zone of proximal development with the administration of DA.

Secondly, teachers should carefully design tasks to be included in DA to make sure that the designed tasks match the students' level of proficiency as well as zone of proximal development (ZPD) (Gibbon, 2002). This is because the new knowledge should be built upon the existing knowledge according to Vygotsky's sociocultural theory (1978). Furthermore, the tasks should be cognitively challenging and students must receive enough support from more competent others to carry them out (Gibbon, 2002; Tally, 2014). Furthermore, when teaching low proficiency students, the instructor should sustain their self-confidence by starting with simpler concepts and techniques to build a sense of accomplishment (Brown, 2014) before moving on to more linguistically and cognitively demanding tasks.

Thirdly, teachers should keep in mind that DA may not work equally with all students in their class. They can use DA to assess students' knowledge on an ongoing basis. If the instructor finds problems that DA cannot help the students internalize the concept they are teaching, other instructional approaches may be used to provide the background of the concept. Teachers should also take into careful consideration how linguistic resources can be employed to convey meaning before DA is used as a metacognitive mediation or other-regulation to regulate students to utilize the concept being taught (Davin, 2016; Karpov & Haywood, 1998; Miller, 2011). Simply put, suitable instructional approaches and DA tasks can be both implemented as long as

they can satisfy students' needs and solve learning problems and obstacles students are facing.

In addition, if DA is to be implemented with students with a low level of English proficiency, teachers should be aware that extra time may be needed when designing their lessons. Teachers may need more time to teach and give explanation, and low proficiency students may need more time to comprehend and process teachers' teaching and perform the assigned tasks. Also, extra time may also be needed for students to build rapport with their classmates as some DA tasks may require pair and/or group activities and collaboration in order for them to be successfully implemented. In particular, group cohesiveness is necessary for successful implementation of group dynamic assessment (Poehner, 2009), making students feel comfortable working with classmates and cooperating with and learning from teachers/mediators.

Lastly, just like when other teaching and assessing methods are implemented, students' positive attitudes are a major contributing factor to success. When DA is implemented, particularly with low proficiency students, teachers should provide students with the "mediation of feelings of competence" (Mazzotta, 2018, p. 62). Feuerstein et al. (1988) explain that students will acquire the feelings of competence when the mediator interprets their performance as the meaning of achievement, and their perception of improvement will likely lead to confidence and motivation, both of which are important for success in learning. Students' self-confidence points to the importance of self-assessment and partly leads to achievement in tasks (Brown, 2007). Intrinsic motivation, in particular, is an internal reward for feeling competent and determined (Brown, 2014). Thus, both emotional factors will help low

proficiency students sustain their learning through challenges they encounter due to their limited English proficiency.

5.5 Limitations of the Study

There were limitations of the present study that should be acknowledged. The intervention was intentionally designed to be intensive tutorials that lasted four weeks. However, it appeared to be too short given that low proficiency students needed extra learning time to develop enough English skills in reading, grammar, and syntax before DA could be effectively applied. The time was also insufficient for the participants to build strong group cohesiveness. Moreover, the administration of each DA session took longer than it was planned. Thus, the intervention may not have allowed the development of students' vocabularly knowledge to fully manifest.

In addition, the task design in the present study may have have been inapprorpaite for the participants to successfully accomplish the objectives of the tasks. For example, the sentence writing task tended to be too difficult for the participants who had little syntactical knowledge, and the part of speech task unintentionally allowed the participants to use a test-taking strategy instead of the part of speech strategy that was intended to be used. As such, the participants' achievement of the constructs was hardly evident. This led to a conclusion that the DA tasks did not enable the participants to acquire the target vocabulary knowledge as effectively as anticipated.

Finally, even though the mixed-method research design with a focus on qualitative methodology was selected in the present study, the small number of five participants may not have shed sufficient light on individual differences in cognitive, affective, and behavioral aspects of the participants.

5.6 Recommendations for Future Research

Based on the study findings, the following recommendations for further studies could be made.

1.   Research should be undertaken with different types of DA including cumulative GDA and computerized DA to determine if and which type of DA can more effectively help low proficiency students learn academic vocabulary.

2.   Further research should also be carried out with students with intermediate and advanced levels of proficiency to better understand the effectiveness of DA on vocabulary learning when it is implemented with students with different levels of English proficiency.

3.   To bettern determine the effects of DA on vocabulary learning, experimental research should be conducted with a much larger sample size to statistically determine the effectiveness of DA on vocabulary acquisition of low proficiency learners. In addition, qualitative research should also be done with prolonged data collection and with different data collection methods such as classroom observation and in-depth interviews to triangulate the findings so as to arrive at a thick and rich description of how DA affects vocabulary learning of students, especially those with a low level of English proficiency.

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APPENDICES

APPENDIX A

The Adapted Academic Vocabulary Test

Directions: Match 3 out of 6 words on the right to the meanings on the left by writing the letters a-f in the blanks.

Example:

    _**e**_ help solve a conflict

    _**c**_ help something grow

    _**f**_ not give something the care it needs

    a.   allocate
    b.   confine
    c.   cultivate
    d.   fulfill
    e.   mediate
    f.   neglect

1   __ get something

    __ produce something

    __ see something in a certain way

    a.   encourage
    b.   generate
    c.   obtain
    d.   perceive
    e.   publish
    f.   refer

2   __ a certain way of doing something

    __ an answer to a problem

    __ an ability to reach or use something

    a.   access
    b.   attempt
    c.   basis
    d.   meaning
    e.   procedure
    f.   solution

3   __ a promise to do something

    __ a thing that somebody has made

    __ someone who works with you

    a.   colleague
    b.   commitment
    c.   creation
    d.   experiment
    e.   flow
    f.   percentage

4   __ give up

    __ include

    __ show

    a.   constitute
    b.   display
    c.   incorporate
    d.   inform
    e.   interpret
    f.   yield

5 __ fast (adjective)

 __ following rules of honest behavior

 __ seeming to be a certain way

a. apparent
b. dependent
c. ethical
d. extensive
e. joint
f. rapid

6 __ a meeting of a group of people

 __the state of being correct

 __ the movement of large numbers of people or animals

a. indicator
b. assembly
c. processing
d. complexity
e. accuracy
f. migration

7 __ better

 __ not concrete

 __ stated directly

a. absolute
b. abstract
c. emerging
d. explicit
e. integrated
f. superior

8 __ continue to do something

 __ keep something on its own

 __ reach a goal or objective

a. attain
b. diminish
c. exploit
d. induce
e. isolate
f. persist

9 __ help

 __ mention a rule, etc., as a reason for doing something

 __ show something clearly

a. aid
b. center
c. deem
d. invoke
e. manifest
f. originate

10 __ express something in a certain way

 __ make the best of something

 __ organize different parts of an activity

a. coordinate
b. designate
c. differentiate
d. formulate
e. maximize
f. reproduce

Adapted from

Pecorari, D., Shaw, P., Malmström, H., & Irvine, A. (2011). English textbooks in parallel-language tertiary education. *TESOL Quarterly, 45*(2), 313-333. doi:10.5054/tq.2011.247709

APPENDIX B

The NVLT of the 1st and 2nd 1,000 Word Family Levels

Directions: Put a check under the word that matches each meaning.

Example:

	game	island	mouth	movie	song	yard
land with water all around it		✓				
part of your body used for eating and talking			✓			
piece of music					✓	

1,000 Word Level

	choice	computer	garden	photograph	price	week
cost						
picture						
place where things grow outside						

	eye	father	night	van	voice	year
body part that sees						
parent who is a man						
part of the day with no sun						

	center	note	state	tomorrow	uncle	winter
brother of your mother or father						
middle						
short piece of writing						

	box	brother	horse	hour	house	plan
family member						
sixty minutes						
way of doing things						

	animal	bath	crime	grass	law	shoulder
green leaves that cover the ground						
place to wash						
top end of your arm						

	drink	educate	forget	laugh	prepare	suit
get ready						
make a happy sound						
not remember						

	check	fight	return	tell	work	write
do things to get money						
go back again						
make sure						

	bring	can	reply	stare	understand	wish
say or write an answer to somebody						
carry to another place						
look at for a long time						

	alone	bad	cold	green	loud	main
most important						
not good						
not hot						

	awful	definite	exciting	general	mad	sweet
certain						
usual						
very bad						

2,000 Word Level

	coach	customer	feature	pie	vehicle	weed
important part of something						
person who trains members of sports teams						
unwanted plant						

	average	discipline	knowledge	pocket	trap	vegetable
food grown in gardens						
information which a person has						
middle number						

	circle	justice	knife	onion	partner	pension
round shape						
something used to cut food						
using laws fairly						

	cable	section	sheet	site	staff	tank
part						
place						
something to cover a bed						

	apartment	cap	envelope	lawyer	speed	union
cover for letters						
kind of hat						
place to live inside a tall building						

	argue	contribute	quit	seek	vote	wrap
cover tightly and completely						
give to						
look for						

	avoid	contain	murder	search	switch	trade
have something inside						
look for						
try not to do						

	bump	complicate	include	organize	receive	warn
get something						
hit gently						
have as part of something						

	available	constant	electrical	medical	proud	super
feeling good about what you have done						
great						
happening all the time						

	environmental	junior	pure	rotten	smooth	wise
bad						
not rough						
younger in position						

Adopted from

Webb, S., Sasao, Y., & Ballance, O. (2017). The updated Vocabulary Levels Test. *ITL – International Journal of Applied Linguistics, 168*(1), 33-69. doi:10.1075/itl.168.1.02web

APPENDIX C

Academic Words in DA Tasks

A. Morphology Task

Word	Part of speech	Order in AVL	Root in AVL	Order of Root in AVL	
Regular Task (Group DA)					
critical	adj	178			
merely	adv	461			
settlement	n	491			
restrictions	n	685	restrict (v)	694	
uncertainty	n	722			
sustainable	adj	817			
extended	adj	852	extend (v)	309	
importantly	adv	992			
Transfer Task (Group DA)					
association	n	164			
primarily	adv	363	primary (adj)	222	
variation	n	455			
racial	adj	501			
capability	n	562			
emerging	adj	770	emerge (v)	282	
inevitably	adv	975			
reproduction	n	1000			
Individualized DA					
exclusion	n	928	exclude (v)	618	
notably	adv	938			
corresponding	adj	998			

B. Part of Speech Task

Word	Part of speech	Order in AVL	Collocation Type	Collocation Frequency	Mutual Information Score
Regular Task (Group DA)					
internal *conflict*	n	175	adj-n	682	4.79
relatively stable	adv, adj	251, 610	adv-adj	840	6.35
largely based	adv	338	adv-past participle	949	3.71
enhance learning	v	365	v-n	670	5.35
rapidly growing	adv	578	adv-adj	821	6.28

commonly used	adv	625	adv-past participle	1162	7.40
comparable results	adj	823	adj-n	214	3.12

Transfer Task (Group DA)

Word	Part of speech	Order in AVL	Collocation Type	Collocation Frequency	Mutual Information Score
natural resource	adj, n	119, 80	adj-n	8506	6.20
social *interaction*	n	218	adj-n	3393	5.05
rural development	adj	370	adj-n	634	3.67
encounter difficulties	v	576	v-n	576	5.97
greatly concerned	adv	683	adv-past participle	108	3.22
render assistance	v, n	711, 401	v-n	111	4.17
potentially dangerous	adv	886	adv-adj	1328	6.39

Individualized DA

Word	Part of speech	Order in AVL	Collocation Type	Collocation Frequency	Mutual Information Score
widely accepted	adv	458	adv-past participle	449	8.02
vital information	adj	647	adj-n	657	3.45
readily accessible	adv, adj	742, 917	adv-adj	408	7.81

C. Guessing Meaning from Context Task

Word	Part of speech	Order in AVL	Clue Type	
recognition	n	431	cause/effect	
characterize	v	440	association	
comprehensive	adj	471	contrast/comparison	
reinforce	v	585	example	
regardless	adv	620	description	
excessive	adj	905	cause/effect	
evaluate	v	314	description	
approximately	adv	376	appositive	
fundamental	adj	400	description	
efficiency	n	550	word in series	
retain	v	568	contrast/comparison	
constraint	n	673	modification	

judgment	n	417	description	
subsequently	adv	812	word in series	

D. Sentence Writing Task

Word	Part of speech	Order in AVL			
Regular Task (Group DA)					
component	n	229			
specifically	adv	359			
incorporate	v	422			
ongoing	adj	588			
inquiry	n	658			
Transfer Task (Group DA)					
Word	**Part of speech**	**Order in AVL**			
essential	adj	330			
reduction	n	481			
simultaneously	adv	672			
foster	v	715			
considerably	adv	901			
Individualized DA					
consistent	adj	343			
minimize	v	701			

APPENDIX D

Academic Words in Pretest (Delayed Posttest) and Immediate Posttest

1. Academic Words in Pretest (also Delayed Posttest)

Part I: Morphology					
Word	**Part of speech**	**Order in AVL**			
enhance	v	365			
reduction	n	481			
greatly	adv	683			
comparable	adj	823			
Part II: Part of Speech (academic words in italics)					
Word	**Part of speech**	**Order in AVL**	**Collocation Type**	**Collocation Frequency**	**Mutual Information Score**
primarily focused	adv	363	adv-past participle	214	6.89
strong *association*	n	440	adj-n	177	3.82
restrict access	v	694	v-n	284	8.68
newly *emerging*	adj	770	adv-adj	254	5.96
Part III: Guessing Meaning from Context					
Word	**Part of speech**	**Order in AVL**	**Clue Type**		
incorporate	v	422	association		
variation	n	455	example		
rapidly	adv	578	modification		
stable	adj	610	description		
Part IV: Sentence Writing					
Word	**Part of speech**	**Order in AVL**			
conflict	n	175			
comprehensive	adj	471			
reinforce	v	585			
subsequently	adv	812			

2. Academic Words in Immediate Posttest

Part I: Morphology					
Word	**Part of speech**	**Order in AVL**			
evaluate	v	314			

efficiency	n	550			
readily	adv	742			
sustainable	adj	817			

Part II: Part of Speech

Word	Part of speech	Order in AVL	Collocation Type	Collocation Frequency	Mutual Information Score
specifically related	adv	359	adv-past participle	148	5.10
comprehensive plan	adj	471	adj-n	565	6.84
minimize damage	v	701	v-n	424	5.89
considerably different	adv	901	adv-adj	107	4.63

Part III: Guessing Meaning from Context

Word	Part of speech	Order in AVL	Clue Type		
extend	v	309	cause/effect		
merely	adv	461	contrast/ comparison		
capability	n	562	word in series		
ongoing	Adj	588	appositive		

Part IV: Sentence Writing

Word	Part of speech	Order in AVL			
critical	adj	178			
interaction	n	218			
retain	v	568			
inevitably	adv	975			

APPENDIX C

Academic Words in DA Tasks, Pretest, and Posttest

1. Academic Words in DA Tasks

A. Morphology Task

Word	Part of speech	Order in AVL	Root (in AVL)	Order in AVL	
Regular Task (Group DA)					
critical	adj	178			
merely	adv	461			
settlement	n	491			
restrictions	n	685	restrict (v)	694	
uncertainty	n	722			
sustainable	adj	817			
extended	adj	852	extend (v)	309	
importantly	adv	992			
Transfer Task (Group DA)					
association	n	164			
primarily	adv	363	primary (adj)	222	
variation	n	455			
racial	adj	501			
capability	n	562			
emerging	adj	770	emerge (v)	282	
inevitably	adv	975			
reproduction	n	1000			
Individualized DA					
exclusion	n	928	exclude (v)	618	
notably	adv	938			
corresponding	adj	998			

B. Part of Speech Task

Word	Part of speech	Order in AVL	Collocation Type	Collocation Frequency	Mutual Information Score
Regular Task (Group DA)					
internal *conflict*	n	175	adj-n	682	4.79
relatively stable	adv, adj	251, 610	adv-adj	840	6.35
largely based	adv	338	adv-past participle	949	3.71
enhance learning	v	365	v-n	670	5.35

rapidly growing	adv	578	adv-adj	821	6.28
commonly used	adv	625	adv-past participle	1162	7.40
comparable results	adj	823	adj-n	214	3.12

Transfer Task (Group DA)					
Word	**Part of speech**	**Order in AVL**	**Collocation Type**	**Collocation Frequency**	**Mutual Information Score**
natural resource	adj, n	119, 80	adj-n	8506	6.20
social *interaction*	n	218	adj-n	3393	5.05
rural development	adj	370	adj-n	634	3.67
encounter difficulties	v	576	v-n	576	5.97
greatly concerned	adv	683	adv-past participle	108	3.22
render assistance	v, n	711, 401	v-n	111	4.17
potentially dangerous	adv	886	adv-adj	1328	6.39
Individualized DA					
widely accepted	adv	458	adv-past participle	449	8.02
vital information	adj	647	adj-n	657	3.45
readily accessible	adv, adj	742, 917	adv-adj	408	7.81

C. Guessing Meaning from Context Task

Word	**Part of speech**	**Order in AVL**	**Clue Type**		
Regular Task (Group DA)					
recognition	n	431	cause/effect		
characterize	v	440	association		
comprehensive	adj	471	contrast/ comparison		
reinforce	v	585	example		
regardless	adv	620	description		
excessive	adj	905	cause/effect		
Transfer Task (Group DA)					
evaluate	v	314	description		
approximately	adv	376	appositive		

fundamental	adj	400	description		
efficiency	n	550	word in series		
retain	v	568	contrast/ comparison		
constraint	n	673	modification		
Individualized DA					
judgment	n	417	description		
subsequently	adv	812	word in series		

D. Sentence Writing Task

Word	Part of speech	Order in AVL		
Regular Task (Group DA)				
component	n	229		
specifically	adv	359		
incorporate	v	422		
ongoing	adj	588		
inquiry	n	658		
Transfer Task (Group DA)				
Word	Part of speech	Order in AVL		
essential	adj	330		
reduction	n	481		
simultaneously	adv	672		
foster	v	715		
considerably	adv	901		
Individualized DA				
consistent	adj	343		
minimize	v	701		

APPENDIX D

Academic Words in Prestes (Delayed Posttest) and Immediate Posttest

1. Academic Words in Pretest (also Delayed Posttest)

Part I: Morphology					
Word	**Part of speech**	**Order in AVL**			
enhance	v	365			
reduction	n	481			
greatly	adv	683			
comparable	adj	823			
Part II: Part of Speech					
Word	**Part of speech**	**Order in AVL**	**Collocation Type**	**Collocation Frequency**	**Mutual Information Score**
primarily focused	adv	363	adv-past participle	214	6.89
strong *association*	n	440	adj-n	177	3.82
restrict access	v	694	v-n	284	8.68
newly *emerging*	adj	770	adv-adj	254	5.96
Part III: Guessing Meaning from Context					
Word	**Part of speech**	**Order in AVL**	**Clue Type**		
incorporate	v	422	association		
variation	n	455	example		
rapidly	adv	578	modification		
stable	adj	610	description		
Part IV: Sentence Writing					
Word	**Part of speech**	**Order in AVL**			
conflict	n	175			
comprehensive	adj	471			
reinforce	v	585			
subsequently	adv	812			

2. Academic Words in Posttest

Part I: Morphology					
Word	**Part of speech**	**Order in AVL**			
evaluate	v	314			
efficiency	n	550			
readily	adv	742			
sustainable	adj	817			
Part II: Part of Speech					
Word	**Part of speech**	**Order in AVL**	**Collocation Type**	**Collocation Frequency**	**Mutual Information Score**
specifically related	adv	359	adv-past participle	148	5.10
comprehensive plan	adj	471	adj-n	565	6.84
minimize damage	v	701	v-n	424	5.89
considerably different	adv	901	adv-adj	107	4.63
Part III: Guessing Meaning from Context					
Word	**Part of speech**	**Order in AVL**	**Clue Type**		
extend	v	309	cause/effect		
merely	adv	461	contrast/ comparison		
capability	n	562	word in series		
ongoing	Adj	588	appositive		
Part IV: Sentence Writing					
Word	**Part of speech**	**Order in AVL**			
critical	adj	178			
interaction	n	218			
retain	v	568			
inevitably	adv	975			

APPENDIX E

Materials for Presenting Vocabulary Learning Strategies for DA Tasks

The materials are for introducing the vocabulary strategies and providing relevant linguistic knowledge to the participants before they do each of the four DA tasks, so they are prepared to do the tasks.

The materials include the following:

1. Materials for presenting the analyzing affixes and roots strategy
2. Materials for presenting the analyzing part of speech strategy
3. Materials for presenting the guessing meaning from context strategy
4. Materials for presenting the using a new word to form a sentence strategy

1. Materials for Presenting the Analyzing Affixes and Roots Strategy

The analyzing affixes and roots strategy helps learners discover word meanings from word parts and thus know more words, especially words that are complex and not normally seen (Sasao & Webb, 2017; Schmitt,1997). Affixes refer to prefixes and suffixes which are a letter or group of letters added to roots (the bases to which affixes are added). The red boxes in the picture below show the affixes in the analyzing affixes and roots strategy because they create new words by changing the meaning or part of speech of words.

(http://www.ello.uos.de/field.php/Morphology/DerivationalAffixes)

(https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/english/literacy/readingviewing/Pages/litfocuswordmorph.aspx)
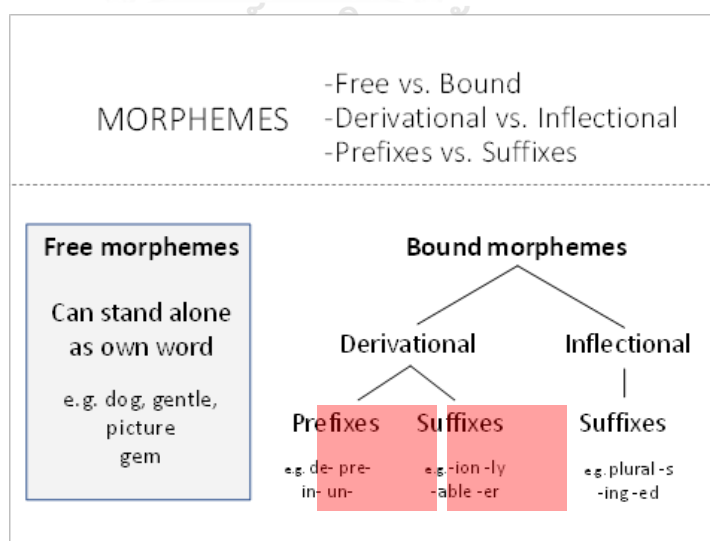
A. Common prefixes of academic vocabulary

A **prefix** is a type of affix that appears at the <u>beginning</u> of a word and changes its meaning, such as the *re–* in *redo*. (Adapted from https://www.dictionary.com/browse/prefix)

The prefixes in the table below are commonly found in academic vocabulary.

Prefix	Meaning	Examples
re-	again or back	revisit, rebuild
dis-	reverses the meaning of the verb	disappear, disconnect
over-	too much	oversleep, overwork
un-	reverses the meaning of the verb	undo, unfasten
mis-	badly or wrongly	mislead, misinform
out-	more or better than others	outperform, outbid
be-	make or cause	befriend, belittle
co-	together	coexist, cooperate
de-	do the opposite of	devalue, deselect
fore-	earlier, before	foreclose, foresee
inter-	between	interact, interface
pre-	before	pretest, pre-expose
sub-	under/below	subcontract, subdivide
trans-	across, over	transform, transcribe
under-	not enough	underfund, undervalue
im-/in- /ir-/il-	not	impatient, inconvenient, irreplaceable, illegal
un	not	unfortunate, uncomfortable
non-	not	non-fiction, non-political
dis-	not	dissimilar, dishonest

(adapted from Vocabulary in English for Academic Purposes: Vocabulary building at http://www.uefap.com/vocab/vocfram.htm)

Exercise 1: Tell the meanings and parts of speech of the given words

Example   fasten (v) =__ผูก, รัดแน่น__ ⇔ unfasten (v)   = __ถอด, ปลดออก_____

1. fiction (…) = _____   ⇔ non-fiction (…)   = _____

2. connect (…) = _____   ⇔ disconnect (…)   = _____

3. legal (…)   = _____   ⇔ illegal (…)   = _____

4. conveniently (…) = _____   ⇔ inconveniently (…) = _____

B. Common suffixes of academic vocabulary

A **suffix** is a type of affix placed at the <u>end</u> of a word and often changes the <u>part of</u> <u>speech</u> of the word it is added to, such as the *-ion* in *creation*.

(Adapted from https://www.dictionary.com/browse/suffix)

Four major parts of speech are nouns, verbs, adjectives, and adverbs.

- **A noun** is a word that refers to a thing (*book*), a person (*sister*), an animal (*cat*), a place (*university*), a quality (*softness*), an idea (*justice*), or an action (*speaking*).
- **A verb** shows an action (*sing*), occurrence (*develop*), or state of being (*exist*).
- **An adjective** describes a noun or pronoun. It usually comes right before a noun: "*close* friends" or follows a linking verb such as *be* or *seem* "that building is *huge*," or "the workers seem *happy*."
- **An adverb** modifies a verb: "The old lady *slowly* walks/ walks *slowly*." It can modify an adjective: "He thought the soup was *extremely* spicy." It can modify an adverb: "He plays the piano *very* beautifully," It can modify a sentence: "*Luckily*, the children arrived home before it rained."

(Adapted from https://www.merriam-webster.com/)

Suffix	Part of Speech	Meaning	Examples
-tion, -sion	noun	action/instance	admission, expansion
-er	noun	person/thing	driver, computer
-ment	noun	action/instance	employment, punishment
-ant, -ent	noun	person	assistant, student
-age	noun	action/result	package, breakage
-al	noun	action/result	denial, proposal
-ence, -ance	noun	action/result	attendance, preference
-ery/-ry	noun	action/instance/place	robbery, bakery
-ity	noun	state/quality	ability, similarity
-ness	noun	state/quality	darkness, preparedness
-cy	noun	state/quality	urgency, frequency
-ize, -ise	verb	(forming verbs)	visualize, symbolize
-ate	verb	(forming verbs)	differentiate, fabricate
-ify	verb	make/become	simplify, exemplify
-en	verb	(forming verbs)	fasten, shorten
-ent	adjective	person/thing	excellent, dependent
-ive	adjective	showing a quality or tendency	attractive, effective

-ous	adjective	(forming adjectives)	dangerous, famous
-ful	adjective	full of	beautiful, careful
-less	adjective	without	endless, careless
-able	adjective	able to be	drinkable, countable
-al	adjective	(forming adjectives)	personal, traditional
-ing	adjective	(present participle: v+ing used as an adjective)	interesting, exciting
-ed	adjective	(past participle: v+ed used as an adjective)	interested, excited
- ly	adverb	in such a way	clearly, possibly

Note: some words change their spelling when a suffix is added.

(Adapted from Vocabulary in English for Academic Purposes: Vocabulary building at http://www.uefap.com/vocab/vocfram.htm)

Additional source: Dictionary of Affixes at https://www.affixes.org/index.html

Exercise 2: Look at the given words. Write the part of speech of each word in the parentheses and the meaning in the blank. You can use a dictionary to help find the answer.

Example excite (v) = _ทำให้ตื่นเต้น___ ⇔ exciting (adj) = ____น่าตื่นเต้น_____

1. attend (…) = _____ ⇔ attendance (…) = _____

2. able (…) = _____ ⇔ ability (…) = _____

3. short (…) = _____ ⇔ shorten (…) = _____

4. example (…) = _____ ⇔ exemplify (…) = _____

5. depend (…) = _____ ⇔ dependent (…) = _____

6. fame (…) = _____ ⇔ famous (…) = _____

7. effective (…) = _____ ⇔ effectively (…) = _____

8. possible (…) = _____ ⇔ possibly (…) = _____

Discussion: Look at the words in Exercise 2. Which words change their spelling after an affix is added?

2. Material for Presenting the Analyzing Part of Speech Strategy

The analyzing part of speech strategy helps learners store vocabulary and use words in a grammatically correct manner (Schmitt, 2000). It also helps learners infer the meaning of unknown words in a text (Clarke & Nation, 1980; Qian, 2004). Moreover, the part of speech can be used to teach collocations (Palmer, 1933, as cited in

Barnbook et al., 2013), which are groups of words that often appear together and cover up to 50 percent of the English language (Siyanova-Chanturia, 2015).

★ Four major parts of speech are **nouns, verbs, adjectives, and adverbs**.

- **A noun** is a word that refers to a thing (*book*), a person (*sister*), an animal (*cat*), a place (*university*), a quality (*softness*), an idea (*justice*), or an action (*speaking*).
- **A verb** shows an action (*sing*), occurrence (*develop*), or state of being (*exist*).
- **An adjective** describes a noun or pronoun. It usually comes right before a noun: "*close* friends" or follows a linking verb such as *be* or *seem* "hat building is *huge*," or "the workers seem *happy*."
- **An adverb** modifies a verb: "The old lady *slowly* walks/ walks *slowly*."
  It can modify an adjective: "He thought the soup was *extremely* spicy."
  It can modify an adverb: "He plays the piano *very* beautifully,"
  It can modify a sentence: "*Luckily*, the children arrived home before it rained."

(Adapted from https://www.merriam-webster.com/)

★★ We can use the **part of speech** to study **collocations**.

Collocations are groups of words that often appear together. There are plenty of them in English. They help learners learn new meanings from word chunks and use authentic language.

★★★ **Common collocation types based on the part of speech are below.**

1) adjective-noun

- He got a high*(adj)* score*(n)* in that game.

- This is the final*(adj)* step*(n)* of the application process.

2) verb-noun

- It could provide*(v)* data*(n)* to a smartphone through a wireless connection.

- Then, after she had become famous, he tried to make*(v)* contact*(n)* with her.

3) adverb-adjective

- The staff at the resort are *extremely(adv)* *helpful(adj)*.

- Android is 'open source': the operating software is freely*(adv)* available*(adj)*.

4) adverb-past participle (v3)

- His family is *closely(adv)* *connected*(past participle) with his business.

- The gallery works closely with carefully*(adv)* selected*(past participle)* artists.

Exercise: Read the sentences and discuss the meanings. Write the parts of speech of the underlined collocations in the blanks

Example: They're trying to <u>draw attention</u> to themselves. = __v+n____

1. He is happy to <u>receive feedback</u> on projects. = _____

2. He took <u>professional training</u> in deep-sea diving. = _____

3. Sleep problems are <u>fairly common</u> for both adults and children. = _____

4. Music has been <u>directly linked</u> to the development of improved reasoning skills.

   = _____

5. These examples bring us back to the <u>earlier discussion</u> about different styles of dancing. = _____

6. Sometimes worries about <u>genetically modified</u> foods are about food safety. = _____

7. Let me suggest to you that these thinkers are <u>fundamentally</u> <u>wrong</u>, and they would lead to a world full of problems. = _____

3. Materials for Presenting the Guessing Meaning from Context Strategy

        The guessing meaning from context strategy helps learners learn unknown words while reading (Wesche et al., 2010). It is particularly useful for language learners because they seem to rely much on the context to learn a language when they have to read many texts filled with unknown words (Nagy, 2001).

The eight types of discourse clues (Adapted from Sasao, 2013)

Clue	Description
Description	It is explanation and definition. It may be shown directly with the words *mean* and *is*. It may be shown indirectly with the words *or, that is, in other words*, with a similar sentence structure, or without any signal word.
Cause/effect	It shows a cause/effect relationship which is usually marked with *because, as*, *since, thus*, and *therefore*.
Example	It is an example usually marked with *like, for example*, and *such as*.

Contrast/comparison	It includes antonyms which are often marked with *in contrast*, *rather than*, *instead of, unlike*, *but,* and *or.*
Modification	It is a word, phrase, or adjective clause, which is marked with *who*, *which*, and *that*.
Appositive	It is the word or phrase following the unknown word and is typically marked with a comma(,), a colon(:), a semicolon(;), and a dash(-).
Words in series	It is a series of ideas, words, or phrases connected with *and*.
Association	It is an association with a word close to it such as: - a noun and a verb e.g., the presenter entered the room. - an adjective and a noun e.g., a clear presentation.

Exercise: Read the short passages and guess the meanings of the missing words and write them in Thai as well as the clues in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.

1. Today the woods are protected by the people living on the island. In the woods, you can see wildflowers and birds. All the local flowers in this area can be found. The fact that many kinds of birds live in the woods means that the woods are still ……………… .

Meaning: _____ Clue Type: _____

a. scarce   b. hidden   c. abundant   d. adjustable

2. Cats have a good nose for food. Many cats smell food and then walk away without even trying it. Like a person who knows very well how good the wine is by only smelling it, a cat is ……………… at learning all it wants to know without eating the food.

Meaning: _____ Clue Type: _____

a. expert   b. curious   c. obsessed   d. diligent

3. We want to know how long she has been dead. It might be six or seven hours, but I can't be sure until I ………………. the case with more information. For example, I need to know what she ate before she died. She might have eaten something that causes damage to people.

Meaning: _____ Clue Type: _____

a. attract   b. dismiss   c. decorate   d. evidence

4. I visited the town that I had hoped to go to. It was not what I ………………… - I expected it to be nice and quiet, but it was hot and dry, and everything was covered with grey dust. The famous trees and the river were drying up because of the terrible heat.

Meaning: _____ Clue Type: _____

a. supplied   b. competed   c. testified   d. anticipated

5. If children do their drawing, it can form the basis of a useful discussion between the teacher and the child. Younger children can explain their drawings with the help of teachers. Older children can ………………… the ideas behind their drawings by themselves. The drawings can be kept as a record of the child's ideas.

Meaning: _____ Clue Type: _____

a. possess   b. elaborate   c. satisfy   d. compromise

6. The teachers want to give as much help as possible to students who have difficulty seeing

things, but there is still ………………… information to help them offer useful learning materials for the students. Therefore, some basic information about eye problems that these students face must be given to the teachers.

Meaning: _____ Clue Type: _____

a. unnecessary   b. compromising   c. insufficient   d. manipulative

7. The Mantela was not a very big ship. Besides myself, three other people were traveling on the ship. I was sleeping for two hours. When I woke up, I saw the ………………… of the ship by the other travelers, but I was still on the ship with the driver.

Meaning: _____ Clue Type: _____

a. conception   b. privilege   c. specialty   d. abandonment

8. She wanted to be away from Greg. She made the kind of reason that people make at a big party when they want to ………………… someone by getting out of a conversation and moving on to talk with another person. But five minutes later Greg was back at her side again.

Meaning: _____ Clue Type: _____

a. console   b. neglect   c. mingle   d. introduce

Adapted from
Sasao, Y. (2013). *Diagnostic tests of English vocabulary learning proficiency: Guessing from*
    context and knowledge of word parts. (Doctor of Philosophy in Applied
    Linguistics Doctoral dissertation), Victoria University of Wellington,
    Wellington, New Zealand. Retrieved from
    http://researcharchive.vuw.ac.nz/handle/10063/4475

<u>4. Materials for Presenting the Using a New Word to Form a Sentence Strategy</u>

Learners' using a new word to form a sentence strategy helps them strengthen their understanding of the word they meet (Schmitt, 1997). Learners must use the knowledge of the word meaning, part of speech, and probably its collocation and appropriateness to the reader (Schmitt, 2000). This strategy makes learners highly involved in words and is believed to help learners remember them (Zou, 2017).

The basic knowledge for sentence writing is as follows.

★ An English sentence has a **subject** and a **verb**. It begins with a capital letter and ends with a form of punctuation: a period (.), a question mark (?), and an exclamation point (!).

★ A **subject** is a **noun**. It can be a person, place, thing, or idea.

★ There are **two kinds of verbs**:

　　1. **action verbs** (e.g., walk, laugh, drive)

　　They describe an action or movement e.g., George <u>carried</u> a computer notebook.

　　2. **non-action verbs** (e.g., be, seem, look, become, taste, smell)

　　They describe feelings, conditions, or states. They are also known as linking verbs because they <u>link</u> the subject and the rest of the sentence.

　　The apartment <u>looks</u> new.　　　　Jane <u>became</u> the winner.

★**Adjectives** describe nouns or pronouns. There are two places for adjectives.

　　1. Adjectives come **before nouns** e.g., an <u>expensive</u> fee, a <u>friendly</u> classmate.

　　2. Adjectives come **after 'be' and non-action verbs** e.g., He <u>is</u> diligent. The program <u>seemed</u> easy to use.

★**Adverbs** describe a verb, an adjective, another adverb, or even a whole sentence.

　　For example,

　　1. An adverb **describes a verb**:

　　　　The virtual conference <u>ran smoothly</u>. (adv after v)

　　　　Korn <u>actively participated</u> in the conference. (adv before v)

　　2. An adverb **describes an adjective**:

　　　　Students are <u>fully cooperative</u> while learning.

　　3. An adverb **describes another adverb**:

　　　　The documentary ended <u>too quickly</u>.

4. An adverb **describes a whole sentence**.

<u>Finally</u>, we arrived at the answer to this test item.

Adapted from
Pearson Education (2017). *Maximize Your Writing 1*. Hoboken, NJ: Person Education, Inc.
Pearson Education (2017). *Maximize Your Writing 2*. Hoboken, NJ: Person Education, Inc.

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Exercise 1: Identify whether the given sentences are complete or incomplete. Write C for complete and I for incomplete in front of the item numbers. If they are incomplete, rewrite them to be complete sentences in the space provided.

Basic sentence structure: Subject + Verb + Object/Complement

_____ 1. They argue continually.

_____

_____ 2. A solution that is applicable to the problem.

_____

_____ 3. Because it's hard to revise his own mistakes.

_____

_____ 4. Will first sing individually and then as a group.

_____

_____ 5. We found a cultural prejudice against fat people.

_____

_____ 6. Because my left eye is so weak, my right eye has to work harder to

compensate.

_____

Exercise 2: Write a sentence by using the given word and its definition. Making changes to the word (e.g., verb tense, plural noun) is possible. You will write with the teacher and classmates and can use a dictionary when needed.

1. **distinguish** (v)　　= จำแนกความแตกต่าง, แยกแยะ

　　　　　　　　　　= to recognize and understand the difference between two or more

　　　　　　　　　　　things or people

Example: <u>His height</u> <u>distinguishes</u> <u>him</u> from the other boys.

　　　　　<u>S</u>　　+　　<u>V</u>　　+ <u>Object</u>

　　　　<u>He</u> <u>can't distinguish</u> between <u>red and green</u> easily.

　　　<u>S</u>+　　<u>V</u>　　　　　　　　+ <u>Object</u>

Your sentence: _____

2. **supportive** (adj)　= สนับสนุน, เป็นกำลังใจ

　　　　　　　　　　= giving help or encouragement, especially to someone who is in a difficult situation

Examples: <u>Her boss</u> <u>was</u> <u>supportive</u> and gave her time off work to see her mum.

　　　　　<u>S</u>　+　<u>V.be</u>　+　<u>Adj</u>

　　　<u>Children</u> with <u>supportive</u> parents often <u>do</u> better at school than those

　　　without.

　　　　　<u>S</u>　　　　　(Adj before Noun)　　+　<u>V</u>

Your sentence: _____

3. **individually** (adv)　= ทีละหนึ่ง, ทีละราย

　　　　　　　　　　= separately, not together in a group

Example: <u>The kids</u> <u>individually</u> <u>do</u> <u>their homework</u>.

　　　　　<u>S</u>　+　<u>Adv</u>　+　<u>V</u>　+ <u>Object</u>

　　　<u>The children</u> <u>will sing</u> <u>individually</u> and then as a group.

　　　　　<u>S</u>　　+　　　<u>V</u>　　+　<u>Adv</u>

Your sentence: _____

Note: The priority of sentence writing in this research is that the target word presents its concept appropriately in the sentence. The sentence may contain some minor grammatical errors, but they should not interfere with the sentence's meaning.

APPENDIX F

Morphology Task

A. Group DA Task: Regular Task

Directions: **Read the given sentence and discuss its meaning. Identify the root and affix(es) of the boldface words, their meanings, and parts of speech in the blanks and the parentheses (…). You can write the meanings in Thai and may use a dictionary when needed.**

Example: Now that my sons are more **independent (adj)**, I have more time for myself.

root: <u>depend</u> (v)   meaning: <u>พึ่งพา, ขึ้นอยู่กับ</u>

affix: <u>in</u>   part of speech: __-_____

affix: <u>ent</u>   part of speech: <u>forming</u>

<u>adjective</u>

1. His book provides a **critical (…)** analysis of the television industry.

root: _____ (…) meaning: _____

affix: _____   part of speech: _____

affix: _____   part of speech: _____

2. He's **merely (…)** a boy – you can't expect him to understand.

root: _____ (…) meaning: _____

affix: _____   part of speech: _____

affix: _____   part of speech: _____

3. As part of their divorce **settlement (…)**, Jeff agreed to let Polly keep the house.

root: _____ (…) meaning: _____

affix: _____   part of speech: _____

affix: _____   part of speech: _____

4. There are speed **restrictions (…)** on this part of the road. Drive slowly.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

5. At a time of economic **uncertainty** (…), risk-taking can seem difficult.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

6. We bought **sustainable (…)** ingredients that could last for a long time without going bad.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

7. Standing for **extended (…)** periods of time can be bad for your back.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

8. Most **importantly (…),** you must keep a record of everything you do.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

B. Group DA Task: Transfer Task

Directions: Read the given sentence and discuss its meaning. Identify the root and affix(es) of the boldface words, their meanings, and parts of speech in the blanks and the parentheses (…). You can write the meanings in Thai and may use a dictionary when needed.

1. This event was organized in **association (…)** with a local school.

    root: _____ (…)   meaning: _____

    affix: _____   part of speech: _____

    affix: _____   part of speech: _____

2. The university was **primarily (…)** an agricultural college when it was founded over two centuries ago.

    root: _____ (…)   meaning: _____

    affix: _____   part of speech: _____

    affix: _____   part of speech: _____

3. The survey found a wide **variation (…)** in the prices charged for canteen food.

    root: _____ (…)   meaning: _____

    affix: _____   part of speech: _____

    affix: _____   part of speech: _____

4. Please state your name, age, marital status, and **racial (…)** identity.

    root: _____ (…)   meaning: _____

    affix: _____   part of speech: _____

    affix: _____   part of speech: _____

5. Animals in the zoo have lost the **capability (…)** to catch food for themselves.

    root: _____ (…)   meaning: _____

    affix: _____   part of speech: _____

    affix: _____   part of speech: _____

6. The program helps identify **emerging (…)** trends in drug use that may cause new problems.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

7. Jaturong will **inevitably (…)** have to choose between the two job offers.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

8. This book has copyright to prevent unauthorized **reproduction (…)**.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

C. Individualized DA Task

Directions: Read the given sentence and discuss its meaning. Identify the root and affix(es) of the boldface words, their meanings, and parts of speech in the blanks and the parentheses (…). You can write the meanings in Thai and may use a dictionary when needed.

1. Several mean girls at the school made everyone angry due to their **exclusion (…)** of many girls from their lunch table.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

2. Her writing ability has **notably (…)** improved over the past year. It is very good.

      root: _____ (…)   meaning: _____

      affix: _____   part of speech: _____

      affix: _____   part of speech: _____

3. As the course becomes more difficult, there is usually a **corresponding (…)** drop in attendance.

root: _____ **(…)**   meaning: _____

affix: _____   part of speech: _____

affix: _____   part of speech: _____

APPENDIX G

Part of Speech Task

A. Group DA Task: Regular Task

Directions: Read the sentences. Fill in the blanks by choosing one word from Group A and the other word from Group B to form a correct collocation. Identify the type of collocation by writing in the blank. The word groups that contain academic words are in bold.

Example: How long have you been developing apps, what is the most **(A)** significant **(B)** difference between now and when you began?

A) **signify, significant, significance**   B) **differ, different, difference**

Type of collocation: __adj+n___

1. When the relationship is solid and true, there is very little doubt, questions, or

_(A)_____   _(B)_____.

A) internalize, internal, internally   B) **conflict, conflicted, conflictual**

Type of collocation: _____

2. The number of new arrivals has remained _(A)_____

_(B)_____ with about 420,000 on average per year.

A) **relative, relatively, relativism**   B) **stable, stably, stableness**

Type of collocation: _____

3. The allergy of specific soy foods is _(A)_____

_(B)_____ on processing techniques.

A) **large, largely, largeness**   B) base, based, basely

Type of collocation: _____

4. Some strategies are specific to a group of students, but more often than not, the same strategy can be used to _(A)_____ _(B)_____ for everybody in a classroom.

A) **enhance, enhancement, enhancing**   B) learn, learner, learning

Type of collocation: _____

5. We are a _(A)_____ _(B)_____ software company who continue developing and improving our products.

A) **rapid, rapidly, rapidity**   B) grow, growing, growingly

Type of collocation: _____

6. The start menu of the computer shows the programs that are

__(A)_____ __(B)_____.

A) **common, commonly, commoner**   B) use, used, user

Type of collocation: _____

7: Only 26 percent of female officers had children. Analysis of more recent data provides _(A)_____ _(B)_____.

A) **compare, comparable, comparison**   B) results, resulted, resulting

Type of collocation: _____

B. Group DA Task: Transfer Task

Directions: Complete the gaps in the given sentences by choosing one word from each group and arranging them to form a correct collocation. Identify the type of collocation by writing in the blank. The word groups that contain academic words are in bold.

Example: The following ideas can <u>stimulate</u> <u>discussion</u> among the employees during the meeting.

| discuss, discussed, discussion | **stimulate, stimulated, stimulation** |

Type of collocation: ___v+n_____

1. Solar energy is the _____ _____ to generate electricity for remote communities.

| **nature, natural, naturally** | **resource, resourceful, resourcefully** |

Type of collocation: _____

2. The night market serves as both a cultural center and a place for _____ _____ among the city residents.

| **interact, interaction, interactive** | **social, society, socially** |

Type of collocation: _____

3. We should boost _____ _____ to narrow the gap between this area and the city.

| **rural, rurally, ruralism** | develop, developed, development |

Type of collocation: _____

4. There continues to be many children who _____ _____ when learning to read.

| difficult, difficulty, difficultly | **encounter, encountering, encounters** |

Type of collocation: _____

5. Married women are also _____ _____ with being fashionable
but their outfits should completely cover the thighs and the stomach.

concern, concerned, concerning   **great, greatly, greatness**

Type of collocation: _____

6. They will clarify the roles of the organizations who _____
_____ to victims of disaster and their companion animals.

render, rendering, renderer   assist, assisting, assistance

Type of collocation: _____

7. Warning signs provide advance notice to road users about _____
_____ conditions on or near the road.

danger, dangerous, dangerously   **potent, potential, potentially**

Type of collocation: _____
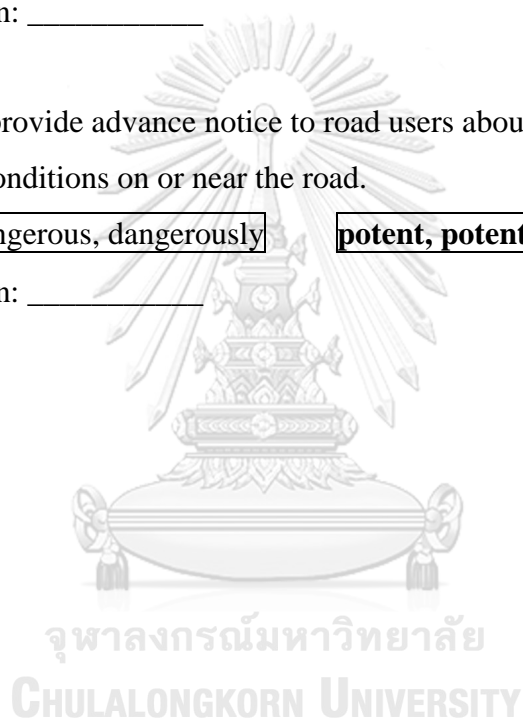
C. Individualized DA Task

Directions: Read the sentence. Fill in the blanks by choosing one word from Group A and the other word from Group B to form a correct collocation. Identify the type of collocation by writing in the blank. The word groups that contain academic words are in bold.

1. Android is __(A)_____ __(B)_____. Anyone can use this platform for free.

A) **wide, widely, width**   B) accept, accepted, acceptance

Type of collocation: _____

2. This book provides all the __(A)_____ __(B)_____ you need to know about the disease.

A) **vital, vitally, vitalness**   B) inform, informed, information

Type of collocation: _____

Note for Item 3: There is no (A) or (B) to guide. You must arrange the words to form a correct collocation.

3. The restrooms and drinking water are _____ _____ to people with disabilities.

     access, accessible, accessibility   **ready, readiness, readily**

Type of collocation: _____

APPENDIX H

Guessing Meaning from Context Task

A. Group DA Task: Regular Task

Directions: Read the short passages and guess the meanings of the missing words. Write the meanings in Thai in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.

1. The report shows that the managers wanted to support the workers. However, some workers thought that the managers did not tell their good work to other workers, because there was no ……………… from other workers in the office. There should be a system to let others know, feel good, and talk about it.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. recognition   b. depression   c. selection   d. combination

2. When the teachers are sad, angry, sick, and feel tired all the time, these things
 the third level of the long-term tiredness of body and mind. The teachers begin not to see anyone and not to work. They can have many kinds of sickness. They start thinking about students, parents, friends, and family differently.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. acquire   b. transform   c. monitor   d. characterize

3. This website has a lot of good information for teachers to put in the science program at school. Students can learn many things such as oil, forest fire, and health. Although the information can be used to make a ……………… science program, most schools use two to three units a year.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. dominant   b. visible   c. statistical   d. comprehensive

4. For students to sing well and learn many different songs, it would be great for music teachers to teach and ……………… the skills such as having students spend a fixed time practicing these skills and get feedback continuously. Over time, students will build and feel good about their abilities and probably enjoy singing.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. convert   b. reinforce   c. initiate   d. document

5. Strong sunlight is not the friend of anyone's eyes. It's best for everyone, ……………… of age, to protect their eyes from strong sunlight. Babies' eyes should be protected when they are outside. Children need protection but not as much as older people because their bodies are better able to get back to normal.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. likewise   b. thereby   c. regardless   d. furthermore

6. Flooding happened in the park near the lake, and the park, swimming area, and toilets were closed during that time. The water level of the lake rose highly. The rise in water level was partly because of the ……………… amounts of rain as it had rained more heavily than we expected.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. logical   b. excessive   c. desirable   d. equivalent

B. Group DA Task: Transfer Task

Directions: Read the short passages and guess the meanings of the missing words. Write the meanings in Thai in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.

1. Museums often show interesting collections of things. They should communicate knowledge to visitors too. The museum managers should tell the objectives of each show, and ……………… whether the museums are good enough in communicating the knowledge to all museum visitors, that is, do the museums work well? Also, they can ….(same word)…the knowledge that visitors get from the museums.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. adopt   b. attempt   c. evaluate   d. conclude

2. We focus on seven towns in the West. Fifty-four craft producers in the study towns (……………… eight per town) were interviewed. The interviews gave a lot of information about the craft markets. In addition, every street in each of the seven study towns was surveyed during business hours (10:00 A.M. to 2:00 P.M.).

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. previously   b. similarly   c. respectively   d. approximately

3. Throwing is often considered a ……………… or basic motor skill. However, a variety of different exercise routines should be implemented throughout the year to teach students different ways of getting and staying fit such as exercise to music, and fitness games. Teachers should use creative activities to make students want to exercise.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. formal   b. creative   c. fundamental   d. alternative

4. One of the good things about associating between students of different genders is intelligence. Boys and girls have differences in intelligence type. They often learn from each other, act upon each other, and use each other's strong points to cancel out one's weak points. The differences raise one's own ability and learning ………………. .

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. sequence   b. efficiency   c. stability   d. establishment

5. With such an emphasis on planning appropriately for the learning experiences of the young child, would you ………………. a child rather than put him or her into something for which they are not prepared? Keeping children out of school does not help. Those children who are usually screened out or held back are those who benefit the most from education.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. retain   b. assert   c. function   d. stress

6. Interviewer: Has there ever been a topic that you wanted to make into a movie but did not or could not because of certain cultural or financial ………………. ?

Marie: It's always money. I wanted to do many topics but if Hollywood studios don't think that they're going to make money on it, they're not going to give you the money.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. constraint   b. hierarchy   c. summary   d. transmission

C. Individualized DA Task

Directions: Read the short passages and guess the meanings of the missing words. Write the meanings in Thai in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.

1. For years now, I have noticed that many clips of movies that are being advertised use music from other movies instead of their music. The music from well-known movies, especially those with good feelings, can act on a person's ……………….
about whether the movie is good or not. What do you think?

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. manner   b. judgment   c. transition   d. emphasis

2. The tobacco industry fought against the bill because they believed it was much too expensive in terms of the cost transferred to the industry, and then to smokers ………………. in terms of the price of cigarettes, and because it did not give the industry with the protections they had wanted.

- Guess the meaning of the missing word _____

- Choose the correct word form (a-d)

a. positively   b. accurately   c. subsequently   d. traditionally

APPENDIX I
Sentence Writing Task

A. Group DA Task: Regular Task

Directions: Use the given word to write a sentence according to the word definition. Making changes to the word (e.g., verb tense, plural noun) is possible. Two examples of sentences are provided. You can use a dictionary when needed.

Example:

      ambiguous (adj) = คลุมเครือ, ที่ไม่ชัดเจน

                 = not clear and can be understood in more than one way

Example: The last part of her letter was ambiguous.

         S   +V.be + Adj

      The ambiguous wording makes the document very difficult to follow.

      (Adj before Noun) S   + V +   Object

Your sentence: I asked the seller to explain an ambiguous description of the product.

1. **component** (n)   = ส่วนประกอบ

                  = a part that combines with other parts to form something

bigger:

Example: Exercise is one of the key components of a healthy lifestyle.

           S + V + Complement

        The course has four main components: business law, finance, computing and

         S   +   V + Complement

    management skills.

Your sentence: _____

2. **specifically** (adv)   = โดยเฉพาะ

                 = for a particular reason, purpose, etc.

Example: Jantra specifically designed these jeans for women.

       S +   Adv +   V   +   Object

They bought the land specifically to build a hotel.

    <u>S</u> +   <u>V</u> + <u>Object</u> + <u>Adv</u>

Your sentence: _____

3. **incorporate** (v)   = รวมเข้าด้วยกัน

                    = to include something as part of something larger

Example: <u>The film</u> <u>incorporates</u> <u>elements</u> of fantasy and science fiction.

       <u>S</u> +   <u>V</u>   + <u>Object</u>

    <u>We</u> <u>have incorporated</u> all the latest <u>safety features</u> into the design.

     <u>S</u> +   <u>V</u>   + <u>Object</u>

Your sentence: _____

4. **ongoing** (adj)   = ต่อเนื่อง, ไม่หยุดยั้ง

                    = continuing to exist or develop

Example: <u>There</u> is <u>an ongoing investigation</u> into the cause of the crash.

     <u>S</u> + <u>V</u> + <u>Complement</u> (Adj before Noun)

    <u>Discussions</u> between the residents and the government officers <u>are</u> <u>ongoing</u>.

       <u>S</u>+   <u>V.be</u> + <u>Adj</u>

Your sentence: _____

5. **inquiry** (n)   = คำถาม

                    = a question you ask to get information

Example: <u>We</u> <u>are getting</u> a lot of <u>inquiries</u> about our new service.

     <u>S</u> +   <u>V</u>   + <u>Object</u>

    I do not know who sent the gift, but <u>I</u> <u>will make</u> some <u>inquiries</u>.

                               <u>S</u> +   <u>V</u>   + <u>Object</u>

Your sentence: _____

B. Group DA: Transfer Task

Directions: Use the given word to write a sentence according to the word definition.

A guiding grammatical pattern is provided. Making changes to the word (e.g., verb tense, plural noun) is possible. You can use a dictionary when needed.

Example:

> **modification** (n) = การแก้ไข, การดัดแปลง
>
> = a small change made in something such as a design, plan, or

system

Guiding grammatical pattern: S + V + Object/Complement

Your sentence: <u>Training wheels are a modification we add to normal bicycles for</u>
<u>young children</u>.

1. **essential** (adj)　　= จำเป็นที่สุด, สำคัญ

> = completely necessary; extremely important in a particular
>
> 　situation or for a particular activity

Guiding grammatical pattern: S + V + Object/Complement

> 　　　　Adj before Noun, <u>or</u> Adj after V.be

Your sentence: _____

2. **reduction** (n)　　= การลดลง

> = a decrease in the size, price, or amount of something, or the

act of decreasing something

Guiding grammatical pattern: S + V + Object/Complement

Your sentence: _____

3. **simultaneously** (adv) = โดยเกิดขึ้นพร้อมกัน, ในเวลาเดียวกัน

> = happening or being done at exactly the same time

Guiding grammatical pattern: S + V + Object/Complement

> 　　　　Adv before V, <u>or</u> Adv after V

Your sentence: _____

4. **foster** (v)　　　= ส่งเสริม, สนับสนุน

> = to help something to develop over a period of time

Guiding grammatical pattern: S + V + Object/Complement

Your sentence: _____

5. **considerably** (adv) = อย่างมาก

= much; a lot

Guiding grammatical pattern: S + V + Object/Complement

Adv before V, <u>or</u> Adv after V

Your sentence: _____

C. Individualized DA Task

<u>Directions:</u> **Use the given word to write a sentence according to the word definition. Making changes to the word (e.g., verb tense, plural noun) is possible. You can use a dictionary when needed.**

1. **consistent** (adj) = สม่ำเสมอ, คงเส้นคงวา

= always behaving in the same way, or having the same opinions,

standards, etc.

Examples: <u>She</u> <u>is</u> <u>one of the team's most consistent players</u>.

<u>S</u> + <u>V</u> + <u>Complement</u>   (Adj before Noun)

<u>They</u> <u>are</u> <u>not</u> very <u>consistent</u> in the way they treat their children.

<u>S</u> + <u>V.be</u> +   <u>Adj</u>

Your sentence: _____

2. **minimize** (v) = ทำให้เล็กลงที่สุด, ลดให้เหลือน้อยลงที่สุด

= to reduce something, especially something bad, to the lowest possible level

Guiding grammatical pattern: S + V + Object/Complement

Your sentence: _____

APPENDIX J

Mediation Prompts for DA Tasks

The mediation prompts for DA tasks include the following:

1. Mediation prompts for morphology task

2. Mediation prompts for part of speech task

3. Mediation Prompts for guessing meaning from context task

4. Mediation Prompts for sentence writing task

1. Mediation Prompts for Morphology Task

The stages of giving the prompts are described below. For example, the academic word is "sustainable."

Stage 1: No feedback

Ask the learners: "what could be the meaning and part of speech of the boldface word in the sentence?"

a. If the learners give the correct answers, compliment them and move on to Stage 2.

b. If the learners cannot give the answers because they do not know some other words in the sentence, let them use a dictionary to help with such words (but not the target word). If they still cannot give the answers or their answers are partly correct, move on to Stage 2.

Stage 2: Identifying the number of word parts

Informs that the word "sustainable" has smaller parts, and ask the learners: "how many parts are there in this word?"

a. If the learners can tell the number of word parts, move on to Stage 3.

b. If the learners cannot tell the parts, inform them of the number of word parts e.g., two, and move to Stage 3.

Stage 3: Identifying the root and affix

Ask the learner: "what is the root and affix in this word?"

a. If the learners can tell the root and affix, move on to Stage 4.

b. If the learners cannot tell the root and affix, guide them that the root gives the core meaning. The prefix is in front of the root and the suffix is at the end of the root. Then, ask them again. If learners give the wrong answer, move to Stage 4.

Note for Transfer Task: *The root of the words in the transfer task has a different*

sound and/or spelling from the derivative. The prompts are:

a. If the learners can tell the correct sound and spelling of the root, compliment them and move on to Stage 4.

b. If the learners cannot tell the correct sound and spelling of the root, guide them to type the word in Longman Online Dictionary which shows the word family, and guide them to find the root which is normally the most basic form in the word family.

Stage 4: Identifying the meaning and part of speech of the root and affix

Pinpoint the root and affix e.g., "sustain" and "able," and ask the learners to tell the meaning of each part. They can use the list of affixes that they have studied to identify the meaning and part of speech of the affix.

a. If the learners can tell the meaning of the root and affix correctly, compliment them.

b. If the learners cannot tell the meaning, allow them to use an English-Thai dictionary to find the meaning and part of speech. Guide them to find the affix meaning from https://www.affixes.org/index.html if the affix is not in the provided list. If learners still cannot give the answers, move to Stage 5.

Stage 5: Answer Provision

If the learners still cannot give the correct answers and show signs of confusion, explain how to analyze the word parts step-by-step and refer to the sentence meaning that the derivative is situated. Confirm/provide the answers of the meaning and part of speech of the derivative, root, and affix.

Adapted from

Harris, M. L., Schumaker, J. B., & Deshler, D. D. (2011). The effects of strategic morphological analysis instruction on the vocabulary performance of secondary students with and without disabilities. *Learning Disability Quarterly, 34*(1), 17-33. doi:10.1177/073194871103400102

2. Mediation Prompts for Part of Speech Task

The stages of giving the prompts are described below.

Stage 1: No feedback

Ask the learners to check the sentence and correct any errors independently first.

a. If the sentence is correct, compliment them and ask them to explain their reasoning.

b. If the sentence is incorrect and learners do not realize it, or their reasoning in (a) is wrong, move on to Stage 2.

Stage 2: Existence of error

The mediator indicates that something is still wrong in the sentence.

Follow (a) and (b) of the previous stages and move to Stage 3

Stage 3: Location of error

The mediator repeats or points to the specific segment containing the error.

Follow (a) and (b) of the previous stages and move to Stage 4

Stage 4: Nature of error

The mediator indicates the nature of the error (e.g., 'the sentence already has a verb.')

Follow (a) and (b) of the previous stages and move to Stage 5

Stage 5: Explanation of how to correct the error

The mediator provides clues to help the learners to arrive at the correct form (e.g., 'the collocation needs a noun.')

Follow (a) and (b) of the previous stages and move to Stage 6

Stage 6: Provision of correct form/sentence structure and its explanation

The mediator provides the correct form/ sentence structure and explains the reasons.

Adapted from

Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal, 78*(4), 465-483. doi:10.2307/328585

Davin, K. J., Herazo, J. D., & Sagre, A. (2017). Learning to mediate: Teacher appropriation of dynamic assessment. *Language Teaching Research, 21*(5), 632-651. doi:10.1177/1362168816654309

3. Mediation Prompts for Guessing Meaning from Context Task

The stages of giving the prompts are described below. The participants will go through these stages before they can use a dictionary to find the meanings of the words in the options a, b, c, and d, so they will focus on reading the passages and guessing the missing words first.

Stage 1: No Feedback

Ask the learners: what should be the meaning of the missing word in the short passage?

a. If the learners give the correct meaning, compliment them, and show the target word.

Then ask them where in the passage that helps them guess the meaning? If the learners can tell the right part, compliment them. If they cannot tell, move on to Stage 2.

b. If the learners cannot give the correct meaning, move on to Stage 2.

Stage 2: Implicit Feedback

Explain that they can guess the meaning of the missing word from the nearby context. Give the implicit feedback by focusing on the passage level to help learners know the topic of the passage. Ask the learners again about the meaning of the missing word.

a. If the learners give the correct meaning, compliment them, and show the target word.

b. If the learners cannot answer, move on to Stage 3.

Stage 3: Explicit Feedback

Give explicit feedback by focusing on the sentence level. Ask the learners again about the meaning of the missing word.

a. If the learners give the correct meaning, compliment them, and show the target word.

b. If the learners cannot answer, move on to Stage 4.

Stage 4: More Explicit Feedback

Give more explicit feedback by focusing on the word and phrase levels. Ask the learners again about the meaning of the missing word.

a. If the learners give the correct meaning, compliment them, and show the target word.

b. If the learners cannot answer, move on to Stage 5.

Stage 5: Answer Provision

If the learners still cannot answer or their guessed answers vary, explain how to guess the meaning from the context step-by-step. Then, allow them to use a dictionary to find the meaning of the words in the options a, b, c, and d and choose the correct one. In addition, guide them to check the part of speech and word parts of the target word.

Adapted from
Teo, A. K. (2012a). Effects of Dynamic Assessment on College EFL Learners'
    Reading Skills. *The Journal of Asia TEFL, 9*(1), 57-94.

4. Mediation Prompts for Sentence Writing Task

When giving prompts for this task, there are two levels to consider: semantics and grammar.

Given that the priority is on using vocabulary correctly to its concept, the stages below will be used for semantics as level 1 first. Then the stages will be repeated for grammar as level 2.

Level 1: Semantics

Stage 1: No feedback

Ask the learners to check the sentence and correct any errors independently first.

a. If the sentence is correct, or they can correct any error independently, compliment them. Then ask them to explain their reasoning.

b. If the sentence is incorrect and learners do not realize it, or their reasoning in (a) is wrong, move on to Stage 2.

Stage 2: Existence of error

The mediator indicates that something is still *semantically* wrong in the sentence.

Follow (a) and (b) of the previous stages and move to Stage 3.

Stage 3: Location of error

The mediator repeats or points to the specific segment containing the error.

Follow (a) and (b) of the previous stages and move to Stage 4.

Stage 4: Nature of error

The mediator indicates the nature of the error (e.g., 'the sentence can have only one main verb.')

Follow (a) and (b) of the previous stages and move to Stage 5.

Stage 5: Explanation of how to correct the error

The mediator provides clues to help the learners to arrive at the correct form (e.g., 'the adjective is placed after a verb to be or a non-action verb.')

Follow (a) and (b) of the previous stages and move to Stage 6.

Stage 6: Provision of correct form/sentence structure and its explanation

The mediator provides the correct form/sentence structure and explains the reasons.

<u>Level 2: Grammar</u>

Stages 1-6 are repeated but the focus is on grammatical errors.

Adapted from

Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal, 78*(4), 465-483. doi:10.2307/328585

Davin, K. J., Herazo, J. D., & Sagre, A. (2017). Learning to mediate: Teacher appropriation of dynamic assessment. *Language Teaching Research, 21*(5), 632-651. doi:10.1177/1362168816654309

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY
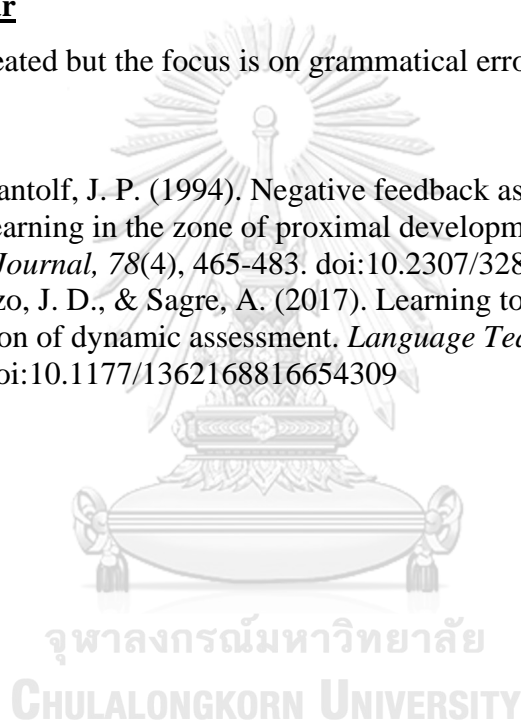
APPENDIX K

Sample of Instructional Framework

(Guessing Meaning from Context Task)

Time 2.40 hours/week (2 sessions x 1.20 hours)

Learning Outcomes:

- Students can recognize the types of discourse clues in context.

- Students can guess the meaning of the academic words in context.

- Students can apply the guessing meaning from context strategy in a more challenging context.

Background Knowledge:

- Knowledge of general vocabulary in the 1st 1000 word list of the BNC/COCA word family lists, which will form 98% of the words in context

- Basic reading of a 50–60-word passage

Materials:

- Materials for presenting guessing from textual context strategy

- Guessing meaning from context tasks: regular and transfer tasks

- Dynamic assessment prompts

- Verbal report probes

- Diary writing questions

- Field note

- Devices: a computer connected to the Internet, worksheets, video & audio recording devices

Assessment:

- Students correctly describe the discourse clues that appeared in the exercise passages.

- Students correctly guess the meaning of the academic words in the regular and transfer tasks.

The first session (1.20 hours): 1ˢᵗ group dynamic assessment (GDA)

Procedure	Material
1. Preparation (5 minutes)	
- The teacher leads group discussion of what strategies the students have employed to guess the meaning of the unknown words. - The teacher introduces students the guessing from textual context strategy and its benefits. - The teacher explains the outcomes of the lesson.	
2. Presentation (25 minutes)	
- The teacher explains different types of discourse clues that lead to the meaning of the unknown words. - The teacher models using the strategy with a few items in the exercise. The teacher thinks aloud to reveal the process of thinking while solving the items to figure out the discourse clue and guess the academic word meaning. - The teacher asks the students to do other items in the exercise.	**The eight types of discourse clues** (Adapted from Sasao, 2013) | Clue	Description
Description	It is explanation and definition. It may be shown directly with the words *mean* and *is*. It may be shown indirectly with the words *or, that is, in other words*, with a similar sentence structure, or without any signals.
Cause/effect	It shows a cause/effect relationship and is marked with *because, as, since, thus*, and *therefore*.
Example	It is an example usually marked with *like, for example*, and *such as*.
Contrast/comparison	It includes antonyms and is often marked with *in contrast, rather than, instead of, unlike, but*, and *or*.
Modification	It is a word, phrase, or adjective clause, which is marked with *who*, | **Exercise: Read the short passages and guess the meanings of the missing words and write them in Thai as well as the clues in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.** 1. Today the woods are protected by the people living on the island. In the woods, you can see wildflowers and birds. All the local flowers in this area can be found. The fact that many kinds of birds live in the woods means that the woods are still ……………… Meaning: _____ Clue Type: _____ a. scarce b. hidden c. abundant d. adjustable 2. Cats have a good nose for food. Many cats smell food and then walk away without even trying it. Like a person who knows very well how good the wine is by only smelling it, a cat is ……………… at learning all it wants to know without eating the food. Meaning: _____ Clue Type: _____ a. expert b. curious c. obsessed d. diligent

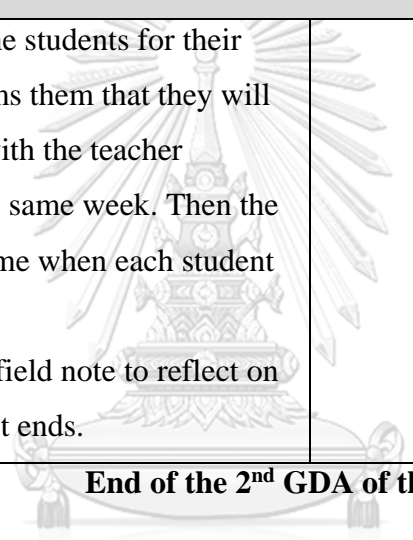| **3. Practice (35 minutes)**	
GDA with regular task and verbal report - The teacher leads the students to apply guessing from textual context strategy to items in the guessing meaning from context task (regular task). - The teacher notifies them of DA mediation. The teacher explains that she will do a group dynamic assessment (GDA) by letting the students do each item together in a group. When they need help, she will give graduated prompts from the most implicit to the most explicit guidance until they can guess the meaning of the missing word correctly which they can tell in Thai, or all the prompts are used. At the end, they can use a dictionary to find the meanings of the options a, b, c, and d and choose the correct word form. - Additionally, if the word form contains prefixes and suffixes, the teacher will ask the students to analyze them so they can recheck their guess by using word part knowledge. - After finishing each item, the students will do a "verbal report" on their cognitive processes while solving each item. Depending on their performance in the task, some probes will be used to elicit their thoughts. Also, the students can ask the teacher to clarify what is still unclear to them.	**Guessing Meaning from Context Task** **A. Group DA Task: Regular Task** **Directions: Read the short passages and guess the meanings of the missing words. Write the meanings in Thai in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.** 1. The report shows that the managers wanted to support the workers. However, some workers thought that the managers did not tell their good work to other workers, because there was no .... from other workers in the office. There should be a system to let others know, feel good, and talk about it. - Guess the meaning of the missing word _____ - Choose the correct word form (a-d) a. recognition b. depression c. selection d. combination 2. When the teachers are sad, angry, sick, and feel tired all the time, these things.................. the third level of the long-term tiredness of body and mind. The teachers begin not to see anyone and not to work. They can have many kinds of sickness. They start thinking about students, parents, friends, and family differently. **Mediation Prompts for the Guessing Meaning from Context Task** The stages of giving the prompts are described below. **Stage 1: No Feedback** Ask the learners: what should be the meaning of the missing word in the short passage? a. If the learners give the correct meaning, compliment them, and show the target word. Then ask them where in the passage that helps them guess the meaning? If the learners can tell the right part, compliment them. If they cannot tell, move on to Stage 2. b. If the learners cannot give the correct meaning, move on to Stage 2. **Stage 2: Implicit Feedback** Explain that they can guess the meaning of the missing word from the nearby context. Give the implicit feedback by focusing on the passage level to help learners know the topic of the passage. Ask the learners again about the meaning of the missing word. a. If the learners give the correct meaning, compliment them, and show the target word. b. If the learners cannot answer, move on to Stage 3. **Verbal Report Probes** แนวคำถามให้นักศึกษาพูดถ่ายทอดความคิด The verbal report probes are for the researcher to ask the participants to report their thoughts while learning academic vocabulary through dynamic assessment. แนวคำถามให้นักศึกษาพูดถ่ายทอดความคิดนี้เพื่อให้นักวิจัยถามนักศึกษาระหว่างการเรียนคำศัพท์ทางวิชาการผ่านการทดสอบแบบพลวัต | Aspects of cognition	Probes
Explanation	- Please tell me why you said/did that ช่วยบอกได้ไหมว่าทำไมนักศึกษาพูด/ทำสิ่งนั้น - What were you paying attention to at this point? Why? นักศึกษากำลังให้ความสนใจอะไรอยู่ในขณะที่ ..... ทำไมจึงสนใจสิ่งนั้น
Evaluations/inferences generated	- What was your understanding of the situation at this point? นักศึกษาเข้าใจสถานการณ์ ..... ตอนนั้นว่าอย่างไร
Outcome anticipated	- At this point, what did you think would happen next? นักศึกษาคิดว่าจะเกิดอะไรขึ้นต่อมาหลังจาก .....
Response considered	- What course(s) of action were you considering at this point? Why? นักศึกษาคิดจะทำอะไรในขณะที่ ...... ทำไมถึงคิดทำสิ่งนั้น	

4. Self-evaluation (15 minutes)	
Diary writing - The teacher introduces an activity of diary writing to the students and explains the questions that they will reflect upon. The students can ask the teacher to clarify what they will write, and will finish writing at the end of the session. - The teacher writes a field note to reflect on the session right after it ends.	**Students' Diaries** บันทึกสะท้อนคิดของนักศึกษา Week _____ Date _____ สัปดาห์ที่ วันที่ Pseudo name _____ นามสมมุติ **Directions: Please answer the following questions** คำชี้แจง: กรุณาตอบคำถามต่อไปนี้ 1. What academic words have you learned today? What are their meanings? วันนี้นักศึกษาได้เรียนคำศัพท์วิชาการอะไรบ้าง แต่ละคำมีความหมายว่าอย่างไร 2. What do you think about the vocabulary learning strategy employed today? นักศึกษาคิดอย่างไรต่อกลยุทธ์การเรียนคำศัพท์ที่ใช้ในวันนี้ 3. How has group dynamic assessment helped you learn academic vocabulary today? Please explain and give some examples

End of the 1st GDA of the week

The second session (1.20 hours): 2nd group dynamic assessment (GDA)

Procedure	Material
1. Preparation (15 minutes)	
- The teacher leads the discussion of what the students did in the 1st GDA to elicit the prior knowledge of the guessing meaning from context strategy by reviewing the discourse clues and some of the items done in the 1st GDA (regular task).	**The eight types of discourse clues** (Adapted from Sasao, 2013) | Clue	Description
Description	It is explanation and definition. It may be shown directly with the words *mean* and *is*. It may be shown indirectly with the words *or, that is, in other words*, with a similar sentence structure, or without any signal.
Cause/effect	It shows a cause/effect relationship and is marked with *because, as, since, thus*, and *therefore*.
Example	It is an example usually marked with *like, for example*, and *such as*.
Contrast/comparison	It includes antonyms and is often marked with *in contrast, rather than, instead of, unlike, but*, and *or*.
Modification	It is a word, phrase, or adjective clause, which is marked with *who,*

2. Expansion (45 minutes)	
GDA with transfer task and verbal report - The teacher leads the students to apply guessing from textual context strategy to another set of items in the transfer task.	**Guessing Meaning from Context Task** **B. Group DA Task: Transfer Task** **Directions: Read the short passages and guess the meanings of the missing words. Write the meanings in Thai in the blanks. Then choose the best option (a-d) for the correct word form. You can use a dictionary to find the meanings of the options.** 1. Museums often show interesting collections of things. They should communicate knowledge to visitors too. The museum managers should tell the objectives of each show, and .... whether the museums are good enough in communicating the knowledge to all museum visitors, that is, do the museums work well? Also, they can ....(same word)...the knowledge that visitors get from the museums. - Guess the meaning of the missing word _____ - Choose the correct word form (a-d) a. <u>adopt</u> b. attempt c. evaluate d. conclude 2. We focus on seven towns in the West. Fifty-four craft producers in the study towns (................. eight per <u>town</u>) were interviewed. The interviews gave a lot of information about the craft markets. In addition, every street in each of the seven study towns was surveyed
- The teacher reminds the students that they will help each other do each item by themselves the same as they did in 1st GDA. However, when they need help, she will give graduated prompts from the most implicit to the most explicit ones until they can arrive at the answer, or all the prompts are used. At the end, they can use a dictionary to find the meanings of the options a, b, c, and d and choose the correct word form.	**Mediation Prompts for the Guessing Meaning from Context Task** The stages of giving the prompts are described below. **Stage 1: No Feedback** Ask the learners: what should be the meaning of the missing word in the short passage? a. If the learners give the correct meaning, compliment them, and show the target word. Then ask them where in the passage that helps them guess the meaning? If the learners can tell the right part, compliment them. If they cannot tell, move on to Stage 2. b. If the learners cannot give the correct meaning, move on to Stage 2. **Stage 2: Implicit Feedback** Explain that they can guess the meaning of the missing word from the nearby context. Give the implicit feedback by focusing on the passage level to help learners know the topic of the passage. Ask the learners again about the meaning of the missing word. a. If the learners give the correct meaning, compliment them, and show the target word. b. If the learners cannot answer, move on to Stage 3.
- After each item, the students will be asked to do a "verbal report" on their cognitive processes while solving each item. Depending on their performance in the task, some probes will be used to elicit their thoughts. Also, they can ask the teacher to clarify what is still unclear to them.	**Verbal Report Probes** แนวคำถามให้นักศึกษาพูดถ่ายทอดความคิด The verbal report probes are for the researcher to ask the participants to report their thoughts while learning academic vocabulary through dynamic assessment. แนวคำถามให้นักศึกษาพูดถ่ายทอดความคิดเพื่อให้นักวิจัยถามนักศึกษาระหว่างการเรียนคำศัพท์ทางวิชาการผ่านการทดสอบแบบพลวัต <table><tr><td>Aspects of cognition</td><td>Probes</td></tr><tr><td>Explanation</td><td>- Please tell me why you said/did that ช่วยบอกได้ไหมว่าทำไมนักศึกษาพูด/ทำสิ่งนั้น - What were you paying attention to at this point? Why? นักศึกษากำลังให้ความสนใจอะไรอยู่ในขณะที่ ..... ทำไมจึงสนใจสิ่งนั้น</td></tr><tr><td>Evaluations/inferences generated</td><td>- What was your understanding of the situation at this point? นักศึกษาเข้าใจสถานการณ์ ..... ตอนนั้นว่าอย่างไร</td></tr><tr><td>Outcome anticipated</td><td>- At this point, what did you think would happen next? นักศึกษาคิดว่าจะเกิดอะไรขึ้นต่อไปหลังจาก .....</td></tr><tr><td>Response considered</td><td>- What course(s) of action were you considering at this point? Why? นักศึกษาคิดจะทำอะไรในขณะที่ ..... ทำไมถึงคิดทำสิ่งนั้น</td></tr></table>

3. Self-evaluation (15 minutes)	

Diary writing (15 mins)
 	
- The students write a diary to reflect on the 2nd GDA the same way as they did for the 1st GDA. They will finish writing at the end of the session.
	Students' Diaries
	บันทึกสะท้อนคิดของนักศึกษา
	
	Week _____ Date _____
	สัปดาห์ที่ วันที่
	Pseudo name _____
	นามสมมติ
	Directions: Please answer the following questions
	คำชี้แจง: กรุณาตอบคำถามต่อไปนี้
	1. What academic words have you learned today? What are their meanings?
	  วันนี้นักศึกษาได้เรียนคำศัพท์วิชาการอะไรบ้าง แต่ละคำมีความหมายว่าอย่างไร
	2. What do you think about the vocabulary learning strategy employed today?
	  นักศึกษาคิดอย่างไรต่อกลยุทธ์การเรียนคำศัพท์ที่ใช้ในวันนี้
	3. How has group dynamic assessment helped you learn academic vocabulary today? Please explain and give some examples

End of the Session: Scheduling Individualized DA (5 mins)	
- The teacher thanks the students for their cooperation and informs them that they will do a few more items with the teacher individually within the same week. Then the teacher appoints the time when each student is available. - The teacher writes a field note to reflect on the session right after it ends.	

End of the 2nd GDA of the week

APPENDIX L

Demographic Characteristics Questionnaire

แบบสอบถามประวัติทั่วไปของนักศึกษา

Directions: Please fill in your information. You can write in Thai.

คำชี้แจง: โปรดกรอกข้อมูลในแบบสอบถาม ท่านสามารถกรอกเป็นภาษาไทย

1. ชื่อจริง (First name) …………………………………นามสกุล (Last name) …..……………………….

2. คณะ (Faculty) ………………………………….. เอก (Major) …………………………………

3. อายุ (Age) ……………….

4. นักศึกษาเรียนภาษาอังกฤษมากี่ปี (How long have you studied English?) …..………………….

5. หลักสูตรมัธยมปลายที่นักศึกษาเรียนมาเป็นแบบใด What was your high school program?

☐ หลักสูตรไทย (Thai Program) ☐ หลักสูตรภาษาอังกฤษ (English Program)

☐ หลักสูตรนานาชาติ (International Program) ☐ อื่นๆ (Others)

โปรดระบุ (Please specify) …..………………….

6. นักศึกษาเคยมีประสบการณ์การอยู่ในประเทศที่ใช้ภาษาอังกฤษในการสื่อสารเป็นระยะเวลาหนึ่งหรือไม่

ประเทศใด โปรดอธิบายประสบการณ์ของนักศึกษา (Have you ever lived in an English-speaking country

for some time? Which country? Please share your experience.

……..

……..

7. นักศึกษามีเพื่อนเป็นชาวต่างชาติหรือไม่ ถ้ามีเป็นคนชาติใด (Do you have any foreign friends? What are

their nationalities?) ………………………………………………………………………………………

8. โอกาสในการใช้ภาษาอังกฤษในชีวิตประจำวันของนักศึกษาเป็นอย่างไร กรุณาตอบเป็นอัตราเปอร์เซ็นต์

   (To what extent are your opportunities for using English in daily life? - please answer them in

percentage)

ฟัง (Listening)_____/100 %   พูด (Speaking)_____/100%

อ่าน (Reading)_____/100%   เขียน (Writing) _____/100%

9. กรุณาอธิบายวิธีการเรียนคำศัพท์ภาษาอังกฤษของตนเอง (Please explain how you learn English

vocabulary) …………………………………………………………………………………………………

………

……

ผู้วิจัยขอขอบคุณนักศึกษาที่ให้ความร่วมมือกรอกข้อมูลในแบบสอบถามนี้

Adapted from
Siwathaworn, P. (2018). *Improving EFL undergraduate students' English speaking skill through dynamic assessment.* (Doctoral), Chulalongkorn University, Bangkok, Thailand.

APPENDIX M

Academic Vocabulary Pretest (Delayed Posttest)

It should be noted that the pretest also served as the delayed posttest in this study.

Time: 40 minutes

The examination paper consists of 4 parts as follows:

Part I:	**Morphology**	**8**	**points**
Part II:	**Part of Speech**	**8**	**points**
Part III:	**Guessing Meaning from Context**	**8**	**points**
Part IV:	**Sentence Writing**	**8**	**points**
	Total	**32**	**points**

This paper consists of 4 pages and students will write answers on this paper.
_____

Part I: Morphology

Directions: Read the sentence and write the Thai meaning of the bold word and

its root (base) and all its affixes (prefixes and/or suffixes) in the blanks. (8 points)

Example:

Great **inequality** exists between the rich and the poor.

inequality = ____ความไม่เสมอภาค, ความไม่เท่าเทียมกัน_____

root = ____equal_____ affix(es) = __in, ity_____

1. Low lighting and soft music **enhance** the atmosphere in the room.

enhance = _____

root = _____ affix(es) = _____

2. New production methods led to a cost **reduction** of about 50 percent.

reduction = _____

root = _____ affix(es) = _____

3. Her piano playing has improved **greatly** since the last time we saw her.

greatly = _____

root = _____ affix(es) = _____

4. Our prices are **comparable** with those in other shops.

    comparable = _____

    root = _____ affix(es) = _____

Part II: Part of Speech

Directions: Read the sentence and select one word from Group A and another from Group B to form a correct pair. Cross (X) one of the numbers 1-3 in both groups.

The group that contains the target academic word is in bold. (8 points)

Example:

We are seeing the (A)_____ (B)_____ towards battery-electric cars.

A)	1. progress	B)	1. **moveable**
	X progressive		2. **movingly**
	3. progressively		**X** **movement**

5. We are (A)_____ (B)_____ on people who do not have health care and educational opportunities.

A)	1. **primary**	B)	1. focus
	2. **primarily**		2. focused
	3. **primaries**		3. focusable

6. We showed that there was a (A)_____ (B)_____ between coffee and increased death rate at the high doses.

A)	1. strong	B)	1. **associate**
	2. strongly		2. **associated**
	3. strength		3. **association**

7. You can use browser tools to (A)_____ (B)_____ to certain web addresses and kinds of content.

A)	1. **restrict**	B)	1. access
	2. **restricted**		2. accessible
	3. **restriction**		3. accessibly

8. Technology librarians now have the opportunity to provide the same services for

(A)_____ (B)_____ apps and tools.

      A)   1. new   B)   **1. emerge**

              2. newly   **2. emerging**

              3. newness   **3. emergence**

Part III: Guessing Meaning from Context

Directions: Read the given short paragraph and select the correct word from the box to write in each blank (8 points)

Example:

She wanted to be away from Chai, who disagreed with her idea. So, she made the kind of reason that people made at a big party when they wanted to ___**isolate**____ themselves from a conversation and move on to talk with another person. She finally separated from Chai and walked toward Mina.

foster	stable	racial	variation
incorporate	rapidly	constraint	inevitably

9. To make the classroom look nicer, consider what student projects could be given that would _____ drawing, design, or artwork and that would support what they are studying. Simple ideas are having students draw a concept being studied. Then the teacher places their work throughout the room. Make sure they are shown nicely.

10. The doctor is worried that children do not have enough sleep. There is _____ in the amount of sleep that each child needs; for example, some kids need eight to ten hours a night while some kids need seven hours. Not all kids need more sleep, but she sees many kids in her work who aren't getting enough.

11. The world has become warmer, and it is shaping the forests of the future. Our forests are _____ changing, which is opposite the slow change in the

past. My job is to study these things, but I would like families to enjoy the forests within their reach, whether in a city park or the mountains.

12. I have driven both small and full-sized pickup trucks in heavy rain and rough roads. A driver would have a better chance of arriving home safely in the full-sized pickup truck. The longer, wider, heavier truck will be much more _____. It has more weight to hold it on the road, and its full size gives the driver better control.

Part IV: Sentence Writing and Translation

Directions: Use the given word to write an English sentence according to the provided meanings and part of speech. Then give the Thai translation of the sentence. (8 points)

Example:

> **interpret** (v) = แปลความหมาย, ตีความ
>
> = to explain the meaning of something in understandable terms
>
> Guiding grammatical pattern: S + V + Object/Complement
>
> Your sentence: <u>Taweesak interpreted technical words in computer to me.</u>
>
> The sentence meaning in Thai: <u>ทวีศักดิ์แปลความหมายคำศัพท์เทคนิคทางคอมพิวเตอร์ให้ฉัน</u>

13. **conflict** (n)   = ความขัดแย้ง, การทะเลาะ

= angry disagreement between people or group

Guiding grammatical pattern: S + V + Object/Complement

A singular or a plural noun is possible.

Your sentence:

_____

The sentence meaning in Thai:

_____

14. **comprehensive** (adj) = ครอบคลุม, เข้าใจได้กว้าง

= complete and including everything that is necessary

Guiding grammatical pattern: S + V + Object/Complement

Adj before Noun, <u>or</u> Adj after V.be

Your sentence: _____

The sentence meaning in Thai: _____

15. **reinforce** (v)   = สนับสนุน, ทำให้แข็งแกร่งขึ้น

                              = to give added strength or support to

Guiding grammatical pattern: S + V + Object/Complement

                                Changing a verb tense is possible.

Your sentence:

_____

The sentence meaning in Thai:

_____

16. **subsequently** (adv) = ต่อมา, ภายหลัง

                              = happening after something else has happened; later

Guiding grammatical pattern: S + V + Object/Complement

                                Adv before V, <u>or</u> Adv after V

Your sentence:

_____

The sentence meaning in Thai:

_____

End of the Test

…………………………………

Key - Pretest (Teacher Only)
Part I: Morphology – 8 points
1.   เพิ่ม, เสริม, ทำให้ดีขึ้น, ยกระดับ (1 point)

     root: enhance (0.5 point)   affix: -/none (0.5 point)
2.   การลด, การลดลง, การตัด, การลดทอน (1 point)

     root: reduce (0.5 point)   affix: -tion (0.5 point)
3.   อย่างมาก, อย่างสูง, มาก, เยอะ (1 point)

     root: great (0.5 point)   affix: -ly (0.5 point)

4. ซึ่งเปรียบเทียบกันได้, พอเปรียบเทียบได้, เทียบเคียงได้ (1 point)

    root: compare (0.5 point)   affix: -able (0.5 point)

Note: Any of the provided Thai meanings applies.
*   Correct spelling is needed to get the point.*

Part II: Part of Speech – 8 points

5.   A) 2. primarily (1 point)   B) 2. focused (1 point)
6.   A) 1. strong (1 point)   B) 3. association (1 point)
7.   A) 1. restrict (1 point)   B) 1. access (1 point)
8.   A) 2. newly (1 point)   B) 2. emerging (1 point)

Part III: Guessing Meaning from Context – 8 points

9.   incorporate
10.   variation
11.   rapidly
12.   stable

Part IV: Sentence Writing – 8 points

The scoring criteria below are for grading items 13-16.

2 points are given if the target word presents its concept appropriately in the sentence. Its grammatical function is used correctly as well as other words used with it. The sentence may contain some minor grammatical errors, but they do not interfere with intelligibility.

1 point is given if the target word presents its concept unclearly in the sentence. Its grammatical function as well as other words used with it are incorrect or hinder the intelligibility.

0 point is given if the target word does not present its concept in the sentence. The sentence is unintelligible or no English sentence is written.

Adapted from

Stubbe, R., & Nakashima, K. (2017). Comparing mastery sentence test scores with L2 to L1 translation test scores. *The Journal of Teaching English for Specific and Academic Purposes*, *5*(4), 719-726.
https://doi.org/10.22190/JTESAP1704719S

APPENDIX N

Academic Vocabulary Immediate Posttest

Time: 40 minutes

The examination paper consists of 4 parts as follows:

Part I:	**Morphology**	**8**	**points**
Part II:	**Part of Speech**	**8**	**points**
Part III:	**Guessing Meaning from Context**	**8**	**points**
Part IV:	**Sentence Writing**	**8**	**points**
	Total	**32**	**points**

This paper consists of 4 pages and students will write answers on this paper.

_____

Part I: Morphology

Directions: Read the given sentence and write the Thai meaning of the bold word and its root (base) and all its affixes (prefixes and/or suffixes) in the blanks. (8 points)

Example:

Great **inequality** exists between the rich and the poor.

inequality = ____ความไม่เสมอภาค, ความไม่เท่าเทียมกัน_____

root = ____equal_____ affix(es) = __in, ity_____

1. Students should be able to **evaluate** teachers because they are the ones who are learning, and their opinions matter.

evaluate = _____

root = _____ affix(es) = _____

2. Because of her **efficiency**, we got all the work done in a few hours.

efficiency = _____

root = _____ affix(es) = _____

3. The VDO shows simple instructions that anyone can **readily** understand.

readily = _____

root = _____ affix(es) = _____

4. There are 31% who say they would pay extra for products that were more **sustainable** than other products.

       sustainable = _____

       root = _____ affix(es) = _____

Part II: Part of Speech

Directions: Read the sentence and select one word from Group A and another from Group B to form a correct pair. Cross (X) one of the numbers 1-3 in both groups.

The group that contains the target academic word is in bold. (8 points)

Example:

We are seeing the (A)_____ (B)_____ towards battery-electric cars.

      A)   1. progress   B)   1. **moveable**

              X progressive   2. **movingly**

              3. progressively   **X** **movement**

5. Interviews lasted 30-40 minutes. The first few questions were (A)_____ (B)_____ to the activities on the video clip.

      A)   1. **specific**   B)   1. **relate**

              2. **specifically**   2. **relation**

              3. **specification**   3. **related**

6. The city needs to develop a (A)_____ (B)_____ to finally get beyond this terrible homeless problem.

      A)   1. **comprehensive**   B)   1. plan

              2. **comprehensively**   2. planned

              3. **comprehensiveness**   3. planner

7. Please read the packaging closely and follow the directions. Applying the product correctly should (A)_____ (B)_____.

    A)   1. **minimal**   B)   1. damage

            2. **minimize**   2. damaging

            3. **minimally**   3. Damageable

8. A community today will almost always be (A)_____ (B)_____ from what it was ten years ago, or will be ten years from now.

    A)   1. **considerable**   B)   1. differ

            2. **inconsiderable**   2. different

            3. **considerably**   3. Difference

Part III: Guessing Meaning from Context

Directions: Read the given short paragraph and select the correct word from the box to write in each blank (8 points)

Example:

She wanted to be away from Chai, who disagreed with her idea. So, she made the kind of reason that people made at a big party when they wanted to ___**isolate**___ themselves from a conversation and move on to talk with another person. She finally separated from Chai and walked toward Mina.

extend	**exclude**	**merely**	**inquiry**
subsequently	**capability**	**excessive**	**ongoing**

9. Our teams still work very hard in the coming hours and days. We're going to go as hard as we can, but we need a little more time. "How long are you willing to _____ the deadline beyond Tuesday?" We hope to finish it near the time that we've set out. That is our goal.

10. Beginning cooks are welcome, but children should have an interest in cooking and be able to stay focused. Also, the cooking class doesn't _____ cover cooking skills. On the fifth day, kids will learn simple rules of presentation, service, and table setting. At the end of the course, each class will prepare a dinner party for parents.

11. The ability of an older person to control their body relates to the amount of work of a person who takes care of them. When the older person who needs care has a low _____ for self-care, has little ability to control their body, or needs more help from others, the work is greater and harder.

12. When I work in a bookstore, I also find it useful to have _____ light conversations with people - while I'm checking them out at the front desk or walking up to them at the bookshelves and asking whether they would like some help. The conversations help me find out what they enjoy and I can offer some books.

Part IV: Sentence Writing

Directions: Use the given word to write an English sentence according to the provided meanings and part of speech. Then give the Thai translation of the sentence. (8 points)

Example:

       interpret (v) = แปลความหมาย, ตีความ

                       = to explain the meaning of something in understandable terms

       Guiding grammatical pattern: S + V + Object/Complement

       Your sentence: Taweesak interpreted technical words in computer to me.

       The sentence meaning in Thai: ทวีศักดิ์แปลความหมายคำศัพท์เทคนิคทางคอมพิวเตอร์ให้ฉัน

13. **critical** (adj)   = เกี่ยวกับการวิจารณ์

                       = giving opinions about the good and bad qualities of

something Guiding grammatical pattern: S + V + Object/Complement

                      Adj before noun, or Adj after V.be

Your sentence:

_____

The sentence meaning in Thai:

_____

14. **interaction** (n)   = การมีปฏิสัมพันธ์ (ระหว่างบุคคล)

                 = the activity of being with and talking to other people, and the way that people react to each other

Guiding grammatical pattern: S + V + Object/Complement

                           A singular or a plural noun is possible.

Your sentence:

_____

The sentence meaning in Thai:

_____

15. **retain** (v)   = เก็บไว้, รักษาไว้

                 = to keep or continue to have something

Guiding grammatical pattern: S + V + Object/Complement

                           Changing a verb tense is possible.

Your sentence:

_____

The sentence meaning in Thai:

_____

16. **inevitably** (adv) = อย่างหลีกเลี่ยงไม่ได้

                 = certain to happen and cannot be avoided

Guiding grammatical pattern: S + V + Object/Complement

                         Adv before V, <u>or</u> Adv after V

Your sentence:

_____

The sentence meaning in Thai:

_____

End of the Test

……………………………..

Key – Posttest (Teacher Only)

Part I: Morphology – 8 points

1.　ประเมิน, ประเมินผล (1 point)

　　root: evaluate (0.5 point)　　affix: -/none (0.5 point)

2.　ประสิทธิภาพ, ความมีประสิทธิภาพ, ความสามารถ (1 point)

　　root: efficient (0.5 point)　　affix: -cy (0.5 point)

3.　อย่างรวดเร็ว, อย่างฉับพลัน, อย่างทันทีทันใด (1 point)

　　root: ready (0.5 point)　　affix: -ly/-ily   (0.5 point)

4.　ยั่งยืน, คงอยู่ได้นาน (1 point)

　　root: sustain (0.5 point)　　affix: -able (0.5 point)

Note:　Any of the provided Thai meanings applies for granting points.
*　　　Correct spelling is needed to get the point.*

Part II: Part of Speech – 8 points

5.　A) 2. specifically (1 point)　B) 3. related (1 point)
6.　A) 1. comprehensive (1point)　B) 1. plan (1 point)
7.　A) 2. minimize (1 point)　　B) 1. damage (1 point)
8.　A) 3. considerably (1 point)　B) 2. different (1 point)

Part III: Guessing Meaning from Context – 8 points

9.　extend
10.　merely
11.　capability
12.　ongoing

Part IV: Sentence Writing – 8 points

The scoring criteria below are for grading items 13-16.

2 points are given if the target word presents its concept appropriately in the sentence. Its grammatical function is used correctly as well as other words used with it. The sentence may contain some minor grammatical errors, but they do not interfere with intelligibility.

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https://doi.org/10.22190/JTESAP1704719S

APPENDIX O

Verbal Report Probes

แนวคำถามสำหรับการพูดถ่ายทอดความคิด

The verbal report probes are for the researcher to ask the participants to report their thoughts while learning academic vocabulary through dynamic assessment.

แนวคำถามให้นักศึกษาพูดถ่ายทอดความคิดมีเพื่อให้นักวิจัยถามนักศึกษาระหว่างการเรียนคำศัพท์ทางวิชาการ ผ่านการทดสอบแบบพลวัต

Aspects of cognition	Probes
Explanation	- Please tell me why you said/did that ช่วยบอกได้ไหมว่าทำไมนักศึกษาพูด/ทำสิ่งนั้น - What were you paying attention to at this point? Why? นักศึกษากำลังให้ความสนใจอะไรอยู่ในขณะที่ ..... ทำไมจึงสนใจสิ่งนั้น
Evaluations/inferences generated	- What was your understanding of the situation at this point? นักศึกษาเข้าใจสถานการณ์ ..... ตอนนั้นว่าอย่างไร
Outcome anticipated	- At this point, what did you think would happen next? นักศึกษาคิดว่าจะเกิดอะไรขึ้นต่อมาหลังจาก .....
Response considered	- What course(s) of action were you considering at this point? Why? นักศึกษาคิดจะทำอะไรในขณะที่ ...... ทำไมถึงคิดทำสิ่งนั้น
Influencer	- What influenced your thinking at this point? สิ่งใดมีผลต่อความคิดของนักศึกษาในขณะที่ .....

Adapted from

Suss, J., Belling, P., & Ward, P. (2014). Use of cognitive task analysis to probe option-generation in law enforcement. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 58*(1), 280-284.

Ward, P., Wilson, K., Suss, J., Woody, W. D., & Hoffman, R. R. (2020). A historical perspective on introspection: Guidelines for eliciting verbal and introspective-type reports. In P. Ward, J. M. Schraagen, J. Gore, & E. Roth (Eds.), *The Oxford Handbook of Expertise* (pp. 377-407). Oxford, UK: Oxford University Press.

APPENDIX P

Researcher's Field Notes

บันทึกภาคสนามของผู้วิจัย

Week/สัปดาห์ที่ _____   Date/วันที่ _____

The guideline for the researcher's field note: แนวทางการเขียนบันทึกภาคสนามของผู้วิจัย

1. Setting สถานที่	Note
1.1 The setting of the intervention ห้องที่ใช้ทำวิจัย	
1.2 Positions of the participants in the room ตำแหน่งของผู้ร่วมวิจัยในห้อง	
1.3 How their positions influence their behavior ตำแหน่งของผู้ร่วมวิจัยในห้องส่งผล ต่อพฤติกรรมของพวกเขาอย่างไร	
1.4 Others อื่นๆ	
2. Participants ผู้ร่วมวิจัย	**Note**
2.1 Verbal & physical behaviors in the session พฤติกรรมทางกายและวาจาในการ เรียนครั้งนี้	
2.2 Baseline physical behaviors such as eye contact พฤติกรรมทางกายพื้นฐานเช่น การ สบตา	

2.3 Others อื่นๆ	
3. Interaction การปฏิสัมพันธ์	**Note**
3.1 Interactions between participants การปฏิสัมพันธ์ระหว่างผู้ร่วมวิจัย	
3.2 Interactions between participants and researcher การปฏิสัมพันธ์ระหว่างผู้ร่วมวิจัยและนักวิจัย	
3.3 Non-verbal communication การสื่อสารแบบอวัจนภาษา	
3.4 Certain behavior such as conflict, collaboration, and decision-making พฤติกรรมบางอย่างเช่น การขัดแย้ง, การร่วมมือ, การตัดสินใจ	
3.5 Others อื่นๆ	
4. Critical reflection การสะท้อนคิดที่สำคัญ	**Note**
4.1 The researcher's role as the mediator in the session บทบาทของนักวิจัยในฐานะผู้บอกใบ้ในครั้งนี้	

4.2 The quality of the given DA mediation prompts คุณภาพของคำบอกใบ้ที่ให้ไป	
4.3 Impressions ความประทับใจ	
4.4 Thoughts ความคิด	
4.5 Feelings ความรู้สึก	
4.6 Biases อคติ	
4.7 Concerns ความกังวล	
4.8 Unanswered questions คำถามที่ยังไม่ได้คำตอบ	
4.9 Corrections of misunderstandings in other parts การแก้ไขความเข้าใจผิดในส่วนอื่นๆ	
4.10 A tentative phenomenon and reasons to support ปรากฏการณ์ที่เป็นไปได้และเหตุผลสนับสนุน	
4.11 Plans for future แผนการในอนาคต	
4.12 Others	

อื่นๆ	

Adapted from

Phillippi, J., & Lauderdale, J. (2018). A guide to field notes for qualitative research: Context and conversation. *Sage Journals*, *28*(3), 381-388. doi:10.1177/1049732317697102

USC Libraries. (2021). *Research guides: Writing field notes*. Retrieved from https://libguides.usc.edu/writingguide/fieldnotes

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APPENDIX Q

Students' Diaries

บันทึกสะท้อนคิดของนักศึกษา

Week _____   Date _____

สัปดาห์ที่   วันที่

Pseudo name _____

นามสมมุติ

Directions: Please answer the following questions

คำชี้แจง: กรุณาตอบคำถามต่อไปนี้

1. What academic words have you learned today? What are their meanings?

   วันนี้นักศึกษาได้เรียนคำศัพท์วิชาการอะไรบ้าง แต่ละคำมีความหมายว่าอย่างไร

2. What do you think about the vocabulary learning strategy employed today?

   นักศึกษาคิดอย่างไรต่อกลยุทธ์การเรียนคำศัพท์ที่ใช้ในวันนี้

*3. How has group dynamic assessment helped you learn academic vocabulary today? Please explain and give some examples

   การทดสอบผสานการสอนแบบกลุ่มช่วยนักศึกษาเรียนคำศัพท์วิชาการในวันนี้อย่างไรบ้าง

   กรุณาอธิบายและยกตัวอย่างประกอบ

4. What problem did you encounter in today's learning? How did you solve it?

   วันนี้นักศึกษาพบปัญหาอะไรในการเรียนบ้าง นักศึกษาแก้ไขปัญหาอย่างไร

5. How do you feel about today's learning? Why?

    นักศึกษารู้สึกอย่างไรต่อการเรียนในวันนี้   เพราะเหตุใด

*หมายเหตุ ในการทำการทดสอบผสานการสอนแบบเดี่ยว คำถามในข้อ 3 เปลี่ยนเป็น

3. How has individualized dynamic assessment helped you learn academic vocabulary today? Please explain and give some examples

   การทดสอบผสานการสอนแบบเดี่ยวช่วยนักศึกษาเรียนคำศัพท์วิชาการในวันนี้อย่างไรบ้าง

   กรุณาอธิบายและยกตัวอย่างประกอบ

APPENDIX R
Attitude Questionnaire
แบบสอบถามทัศนคติ

The attitude questionnaire is for investigating the participants' attitudes toward the use of dynamic assessment model to enhance English academic vocabulary knowledge
แบบสอบถามนี้มีเพื่อศึกษาทัศนคติของผู้ร่วมวิจัยที่มีต่อการทดสอบผสานการสอนเพื่อพัฒนาความรู้ด้านคำศัพท์ภาษาอังกฤษเชิงวิชาการ

Directions: Please read each statement and put ✓ in the right box that is true to you
คำชี้แจง: โปรดอ่านข้อความในแต่ละข้อและทำเครื่องหมาย ✓ ลงในช่องทางขวามือตามความเป็นจริง

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Additional comments / ข้อคิดเห็นเพิ่มเติม

1. What do you like about using group dynamic assessment to enhance English vocabulary knowledge? Please explain and give example(s)

อะไรคือสิ่งที่นักศึกษาชอบในการทดสอบผสานการสอนแบบกลุ่มเพื่อพัฒนาคำศัพท์ทางวิชาการ กรุณาให้เหตุผลและยกตัวอย่าง

_____

ข้อ	ข้อความ	1 ไม่เห็นด้วยอย่างยิ่ง	2 ไม่เห็นด้วย	3 เห็นด้วย	4 เห็นด้วยอย่างยิ่ง
1.	I like learning English academic vocabulary through group dynamic assessment. ฉันชอบเรียนคำศัพท์ภาษาอังกฤษเชิงวิชาการด้วยการทดสอบผสานการสอนแบบกลุ่ม				
2.	I think group dynamic assessment enhances my English academic vocabulary knowledge. การทดสอบผสานการสอนแบบกลุ่มช่วยพัฒนาความรู้คำศัพท์ภาษาอังกฤษเชิงวิชาการของฉัน				
3.	I like group dynamic assessment because of the assistance from the teacher. ฉันชอบการทดสอบผสานการสอนแบบกลุ่มเพราะว่าได้รับความช่วยเหลือจากผู้สอน				
4.	I like group dynamic assessment because of the assistance from peers. ฉันชอบการทดสอบผสานการสอนแบบกลุ่มเพราะว่าได้รับความช่วยเหลือจากนักศึกษาคนอื่น				
5.	While I am taking group dynamic assessment, I think the teacher can correctly assess my ability to learn academic vocabulary. ในระหว่างที่ฉันเข้าร่วมการทดสอบผสานการสอนแบบกลุ่ม ฉันคิดว่าอาจารย์สามารถประเมินความสามารถในการเรียนคำศัพท์วิชาการของฉันได้อย่างถูกต้อง				
6.	I feel comfortable while taking group dynamic assessment. ฉันรู้สึกสบายใจขณะเข้าร่วมทำการทดสอบผสานการสอนแบบกลุ่ม				

ข้อ	ข้อความ	1 ไม่เห็นด้วยอย่างยิ่ง	2 ไม่เห็นด้วย	3 เห็นด้วย	380 4 เห็นด้วยอย่างยิ่ง
7.	Studying in a group helps me learn academic vocabulary learning easier. การเรียนเป็นกลุ่มช่วยให้ฉันเรียนคำศัพท์วิชาการง่ายขึ้น				
8.	I learn academic vocabulary from the other students in the group. ฉันเรียนรู้คำศัพท์วิชาการจากนักศึกษาคนอื่นในกลุ่มเรียน				
9.	I am confident in expressing my thoughts in the group. ฉันมั่นใจที่จะแสดงความคิดของฉันต่อกลุ่มเรียน				
10.	I like individualized dynamic assessment. ฉันชอบการทดสอบผสานการสอนแบบเดี่ยว				

2. What do you dislike about using group dynamic assessment to enhance English

vocabulary knowledge? Please explain and give example(s)

อะไรคือสิ่งที่นักศึกษาไม่ชอบในการทดสอบผสานการสอนแบบกลุ่มเพื่อพัฒนาคำศัพท์ทางวิชาการ กรุณาให้

เหตุผลและยกตัวอย่าง

_____

_____

_____

-3. What are your additional suggestions?

ข้อเสนอแนะเพิ่มเติม

_____

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_____

ขอบคุณสำหรับการตอบแบบสอบถาม

APPENDIX S
Semi-structured Interview Protocol
แนวคำถามกึ่งโครงสร้าง

The semi-structured interview protocol is to investigate the participants' gain from learning academic vocabulary through dynamic assessment and their attitudes toward dynamic assessment.

แนวคำถามกึ่งโครงสร้างเพื่อสำรวจประโยชน์ของการเรียนคำศัพท์วิชาการผ่านการทดสอบแบบพลวัติของผู้ร่วมวิจัยและทัศนคติของผู้ร่วมวิจัยที่มีต่อการทดสอบแบบพลวัต

คำถาม

1. Have you taken dynamic assessment before?

    นักศึกษาเคยร่วมการทดสอบผสานการสอนหรือไม่

2. Please describe what you did during group dynamic assessment?

    โปรดอธิบายว่านักศึกษาทำอะไรในการทดสอบผสานการสอนแบบกลุ่ม

3. What do you gain most from group dynamic assessment?

    นักศึกษาได้ประโยชน์อะไรจากการทดสอบผสานการสอนแบบกลุ่ม

4. Please describe the kinds of feedback and assistance that you received from the teacher and peers. Which one is useful, and which one is not useful to you?

    โปรดอธิบายลักษณะการตอบกลับและการช่วยเหลือที่นักศึกษาได้รับจากอาจารย์และเพื่อน แบบไหนที่มีประโยชน์และ แบบไหนที่ไม่มีเป็นประโยชน์ต่อนักศึกษา

5. How does group dynamic assessment differ from other vocabulary learning techniques that you have learned?

    นักศึกษาคิดว่าการทดสอบแบบผสานการสอนแบบกลุ่มแตกต่างจากเทคนิคการเรียนคำศัพท์อื่นๆที่นักศึกษาเรียนมาอย่างไร

6. How did you feel during a group dynamic assessment?

    นักศึกษารู้สึกอย่างไรต่อการทดสอบผสานการสอนแบบกลุ่ม

7. How did you feel during an individualized dynamic assessment?

    นักศึกษารู้สึกอย่างไรต่อการทดสอบผสานการสอนแบบเดี่ยว

8. What are your suggestions for improving dynamic assessment?

    นักศึกษาอยากแนะนำอะไรเพื่อพัฒนาการทดสอบผสานการสอน

APPENDIX T
Pilot Study

A pilot study was conducted to examine the effectiveness of the instruments, to determine the feasibility of administering the research, and to make appropriate adjustments before the data collection took place. It included piloting the adapted academic vocabulary test, the pretest (delayed posttest) and immediate posttest, and DA tasks.

1. Piloting the Adapted Academic Vocabulary Test

The adapted academic vocabulary test, as a screening instrument, was piloted with 60 students from the same educational context. The results were used to find the test reliability and the means of difficulty and discrimination indices of the adapted test. Since the test was adapted from Academic Vocabulary Test (AVT) (Percorari et al., 2019) and maintained the cluster format, it followed the AVT to use Cronbach's alpha and KR-20 to find the test reliability. The results of piloting showed that Cronbach's alpha of the ten clusters was 0.81. The KR-20 of the 30 items (ten clusters x three items) was 0.84. These reliability estimates were considered appropriate as it was above 0.7 (Kline, 1999). The difficulty index and discrimination index were calculated from the 30 items because the calculating scores must be 0 and 1. The results revealed that the difficulty index mean was 0.40 and was in the acceptable range of 0.3-0.7 (Bachman, 2004). The discrimination index mean (point biserial) was 0.34 which was above the desirable value of +.03 (Henning, 1987). It must be noted that the discrimination index of each item was the corrected item-total correlation of each item shown in SPSS, and the mean was the average of the 30 discrimination indexes combined.
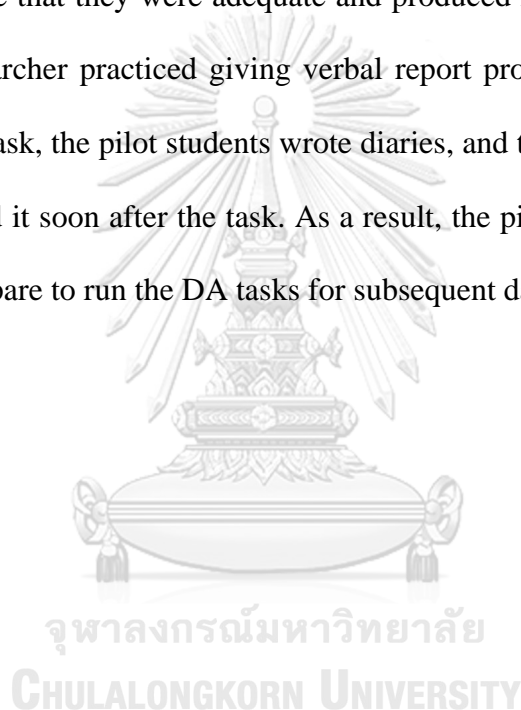
2. Piloting the Pretest (Delayed Posttest) and Immediate Posttest

Piloting the pretest and posttest was to determine the internal reliability of each test and the equivalent forms between the two tests. The tests were piloted with students who shared a similar background with the participants. They were non-English major students who were about the same age, studied at the same campus, and took the same basic English foundation course. 30 homogeneous students were randomly assigned to two groups. Each group consisted of 15 students. The pretest was piloted with the first group, and the posttest was piloted with the other group. The reason why two different groups of students were used was that they allowed the two tests to be piloted at once, which was time-efficient for the research process. To determine the internal consistency, Cronbach's alpha was used, and the reliability estimates of the pretest and posttest were 0.59 and 0.71 respectively. Although Cronbach's alpha of the pretest was a little low, Kline (1999) said that values below 0.7 can be expected for psychological constructs. To determine the equivalent forms between the two tests, the independent sample t-test was run to examine whether the tests generated a significant difference in the mean scores between the two groups (Toprak, 2019). The result showed that the mean scores were not different as the p-value was 0.91 ($p > 0.05$). This implied that the pretest and posttest were equivalent in their difficulty since they did not yield a higher or lower mean score in any group.

3. Piloting the DA Tasks

The four DA tasks, namely the morphology task, the part of speech task, the guessing meaning from context task, and the sentence writing task were piloted with four students who were from the same university campus and were nearly the same age, although their academic vocabulary scores from the adapted academic

vocabulary test were higher than those expected from the participants of this study. The pilot study was conducted to examine the feasibility of administering them before the data collection began. Thus, the DA regular and transfer tasks of the four DA tasks along with their mediation prompts were trialed to match the students' learning and to examine support that may be needed during the DA sessions. Also, the researcher tested the prepared recording instruments including the video and audio recorders to ensure that they were adequate and produced high-quality recordings. In addition, the researcher practiced giving verbal report probes after items in the DA tasks. After each task, the pilot students wrote diaries, and the researcher wrote a field note and expanded it soon after the task. As a result, the pilot of the DA tasks helped the researcher prepare to run the DA tasks for subsequent data collection.

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