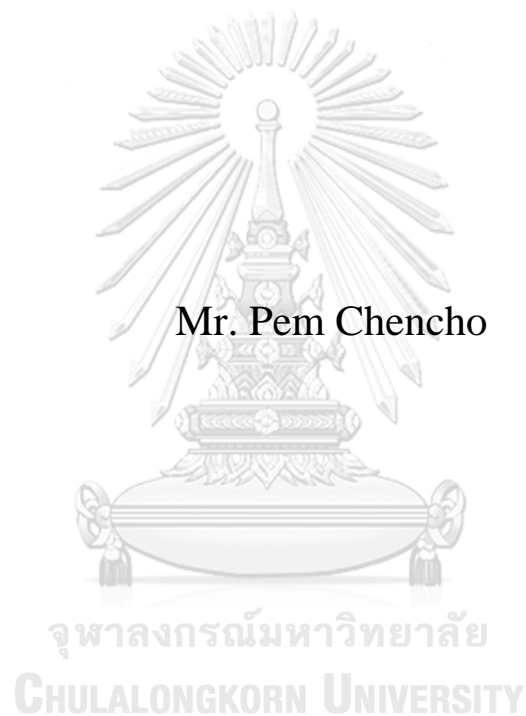


Effects of Vocabulary Instruction Using Bottom-Up and Top-down Instructional Approaches on Bhutanese Secondary Students' Vocabulary Knowledge



Mr. Pem Chenchho

A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Education in Teaching English as a Foreign  
Language

Department of Curriculum and Instruction  
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นักเรียนภูฏานระดับชั้นมัธยมศึกษา



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาครุศาสตรมหาบัณฑิต  
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คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2564

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

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By                                      Mr. Pem Chencho  
Field of Study                      Teaching English as a Foreign Language  
Thesis Advisor                      Assistant Professor MANEERAT EKKAYOKKAYA,  
Ph.D.

---

Accepted by the FACULTY OF EDUCATION, Chulalongkorn University in  
Partial Fulfillment of the Requirement for the Master of Education

----- Dean of the FACULTY OF  
EDUCATION  
(Associate Professor SIRIDEJ SUJIVA, Ph.D.)

THESIS COMMITTEE

----- Chairman  
(Assistant Professor APASARA CHINWONNO, Ph.D.)  
----- Thesis Advisor  
(Assistant Professor MANEERAT EKKAYOKKAYA,  
Ph.D.)  
----- External Examiner  
(Assistant Professor Kittitouch Soontornwipast, Ed.D.)

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งานวิจัยนี้มีวัตถุประสงค์เพื่อ (1)ศึกษาประสิทธิภาพของการสอนคำศัพท์โดยใช้วิธีการสอนแบบล่างขึ้นบน (BU) และวิธีการสอนแบบบนลงล่าง (TD) ที่มีต่อความรู้คำศัพท์ของผู้เรียนภาษาอังกฤษเป็นภาษาที่สอง (2)เปรียบเทียบประสิทธิภาพของวิธีการสอนทั้งสองแบบที่มีต่อการพัฒนาความรู้คำศัพท์ของนักเรียนระดับมัธยมศึกษาชาวภูฏานและ (3)สำรวจความคิดเห็นของผู้เรียนที่มีต่อวิธีการสอนทั้งสองแบบ กลุ่มตัวอย่างที่ใช้ในการวิจัยได้แก่นักเรียนระดับชั้นมัธยมศึกษาปีที่ 4 ชาวภูฏานจำนวน 70 คนจากโรงเรียนมัธยมศึกษาแห่งหนึ่งโดยแบ่งผู้เรียนออกเป็นสองกลุ่ม แต่ละกลุ่มเรียนคำศัพท์ด้วยวิธีการสอนที่แตกต่างกันคือเรียนด้วยวิธีการสอนแบบ BU และเรียนด้วยวิธีการสอนแบบ TD ผู้เรียนได้รับการสอนด้วยวิธีดังกล่าวเป็นระยะเวลา 2 เดือนในการเรียนคำศัพท์เชิงวิชาการจำนวน 168คำ จากนั้นหาข้อมูลเชิงปริมาณด้วยการทดสอบผู้เรียนด้วยแบบทดสอบวัดขนาดความรู้คำศัพท์ (VST) และแบบทดสอบวัดระดับความรู้คำศัพท์ (UVLT) การวิเคราะห์ข้อมูลใช้สถิติพรรณนาและสถิติอ้างอิง นอกจากนี้ใช้การสัมภาษณ์ถึงโครงสร้างเพื่อศึกษามุมมองของผู้เรียนที่มีต่อวิธีการสอนดังกล่าวเพื่อหาข้อมูลเชิงคุณภาพ โดยสัมภาษณ์ผู้เรียนจำนวนทั้งสิ้น 8 คน (กลุ่มละ 4 คน โดยผู้เรียนที่ได้คะแนนสูงและต่ำอย่างละ 2 คน) การวิเคราะห์ข้อมูลจากการสัมภาษณ์ใช้การวิเคราะห์เนื้อหา ผลการวิจัยพบว่าวิธีการสอนทั้งสองแบบช่วยพัฒนาความรู้คำศัพท์ของผู้เรียน ได้อย่างมีประสิทธิภาพ และไม่พบความแตกต่างอย่างมีนัยสำคัญทางสถิติระหว่างผลการพัฒนาความรู้คำศัพท์จากวิธีการสอนทั้งสองแบบ ผู้เรียนส่วนใหญ่มีความเห็นเชิงบวกต่อวิธีการสอนทั้งสองแบบ

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 ภาษาต่างประเทศ

ปีการศึกษา 2564

ลายมือชื่อนิสิต .....

ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

# # 6288012127 : MAJOR TEACHING ENGLISH AS A FOREIGN LANGUAGE

KEYWORD Bottom-Up Instructional Approach (BU) Top-Down Instructional  
D: Approach (TD) vocabulary knowledge secondary school students

Pem Chencho : Effects of Vocabulary Instruction Using Bottom-Up and  
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Vocabulary Knowledge. Advisor: Asst. Prof. MANEERAT  
EKKAYOKKAYA, Ph.D.

This study aimed to (1) investigate the effects of bottom-up (BU) instructional approaches on ESL students' vocabulary knowledge, (2) investigate the effects of top-down (TD) instructional approaches on ESL students' vocabulary knowledge (3) compare the effects of the two approaches on the development of vocabulary knowledge of Bhutanese secondary school students, and (4) explore the students' opinions towards the two approaches. The participants of this study were seventy tenth-graders from a Bhutanese secondary school. They were divided into two groups: BU and TD, and each group of students learned vocabulary through a different instructional approach. The students underwent treatment sessions for two months to learn 168 new academic vocabulary. The students' English vocabulary knowledge was measured quantitatively through vocabulary tests: the vocabulary size test (VST) and the updated vocabulary levels test (UVLT). The data were analyzed through descriptive and inferential statistical techniques. This was followed by a semi-structured interview to extract the views of the participants on the instructional approaches for qualitative data. A total of eight participants (two each of high performers and low performers) from two groups were selected for the interview and the data were analyzed through content analysis. The research findings revealed that both approaches were effective in helping to improve the students' vocabulary knowledge but the results also showed that the improvement in the students' vocabulary knowledge attributed to the BU instructional approach was not significantly different from that of the TD instructional approach. Most participants expressed positive views towards both approaches.

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Field of Study:	Teaching English as a Foreign Language	Student's Signature .....
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## **CHARTER 1**

### **INTRODUCTION**

#### **1.1 The background of the Study**

Learning vocabulary has been consistently an important issue to language students as acquiring new words is accepted to be the premise of language learning (Chin, 2002; Hedge, 2001; Kwon, 2004; T. I. Pae, 2016).

According to Umurova (2018), the amount of vocabulary words mastered by language students correlates with their communicative competence. Schmitt (2000) pointed out that "second language students need approximately 2000 words to maintain conversations, 3000 words families to read authentic texts, and as many as 10,000 words to comprehend challenging academic texts". Alqahtani (2015) emphasizes how inadequate vocabulary knowledge affects the quality of communication in the target language and shows how important vocabulary knowledge is to the language learning process. Many other studies have discovered that having a broad vocabulary knowledge improves writing and reading abilities. (Chou, 2011; Viera, 2017; Karakoç & Köse, 2017). From this we can conclude that without a large vocabulary, the structures and functions we have learned cannot be used for consistent communication.

Over the previous decades, various research has been led to approve the fundamental job of vocabulary learning in English as a Second Language/English as a Foreign Language (ESL/EFL) settings (Helman, 2008; Manzo & Manzo, 2008; Nation, 2013a; Scott et al., 2008). Numerous specialists and experts have agreed with the perspective on the key job of vocabulary information in L2 obtaining, and have battled

to think of down-to-earth and compelling vocabulary picking up/instructing techniques that can be applied to EFL settings.

With the acknowledgment of the significance of vocabulary, numerous methods, and ways to deal with educating and learning vocabulary have risen. These incorporate word families, catchphrases, formal groupings, memory aides, matched partners, and collocation procedures.

This research is precisely been aimed to fill the gap of vocabulary study in the Bhutanese context. A quasi-experimental research between two groups were designed to explore the effects of BU and TD instructional approaches of vocabulary teaching for Bhutanese High School students. The emphasis on L2 vocabulary is mainly based on two considerations. Vocabulary teaching seems to be particularly suitable for L2 delivery that strictly involves BU or TD instructional approaches. Further, in the past years, people have increasingly realized that the teaching of explicit vocabulary is not only related to vocabulary knowledge but also related to the improvement of learning outcomes.

Lately, BU and TD approaches, which have for some time been notable instructional methods in learning L2. These were acquainted with vocabulary learning as an elective learning procedure to the usual way—for example, obtaining just a denotative meaning of words. Students should be exposed to opportunities for extending the understanding of vocabulary information through a progression of the procedure from signifying the importance of a word to understanding its utilization at larger settings, for instance, sentences and improvement in language use at a larger part.

## 1.2 Problem Statements

Some empirical evidence supports the impacts and appropriateness of using BU and TD approaches with L2 students, particularly those in ESL contexts. Given that methodology, such as the depth of preparation and guaranteeing procedures, is closely associated with EFL students' vocabulary achievement (T.-I. Pae, 2016). According to (Chin, 2002), this instructional approach is meaningfully more convincing than treating the basic word-list for EFL students' vocabulary learning. It would be certain that using methodologies such as BU and TD for learning vocabulary in an ESL setting is essential to improve student's vocabulary knowledge.

With regards to studies of techniques, the greater part have been directed to confirm the viability of the procedures to improve tuning in or understanding capacity (Field, 2004; Oh & Lee, 2014; Tsui & Fullilove, 1998), a few are found regarding the upgrade of vocabulary information utilizing the BU and TD approaches (Moskovsky et al., 2015). In other words, while the basic impact of vocabulary learning techniques/approaches on the improvement of vocabulary information has been underlined, there has been minimal observational proof on the adequacy of the BU/TD handling approaches on vocabulary procurement.

### English in Bhutanese Context

The teaching and study of English in Bhutan is guided by 'The Silken Knot: Standards for English for Schools in Bhutan.' This is a policy document established by the Ministry of Education in 2002, (Centre for Educational Research and Development, 2002). Bhutan's English-medium policy is a distinguishing element of the country's government-run education system, which sets it apart from other South and East Asian

countries where local/national languages are most commonly employed for primary school instruction (Farrell et al., 2011).

The medium of instruction in schools in Bhutan is English, however, the English competency of Bhutanese students is significantly low. For example, a study by LaPrairie (2014) revealed that a large number of students in Bhutan reappear to the International English Language Testing System (IELTS) to achieve the minimum mandatory marks. The importance of vocabulary L2 students has looked on effective strategies of vocabulary teaching which showed an increase in vocabulary knowledge.

### **Personal experience**

My own classroom observations and interactions with Bhutanese students, educators, and policymakers throughout the course of my 7-year professional involvement in education sector provide a key motivation for this study. I observed that teaching and learning of vocabulary take place through either direct translation of L1 or the provision of a synonym or an antonym of the target word. A common strategy for learning the vocabulary of Bhutanese students is learning through a bilingual dictionary (English to Dzongkha) to learn new words which haven't proved much academic progress. A study by Akbari (2017) points out that the use of dictionaries and repeated practice strategies of the target words are in practice to learn vocabulary. Student in different cultures, schools, and fields appear to practice such most common strategies.

Bhutanese language teachers in general, pay less attention to the importance of learning vocabulary and haven't seen deploying other strategies of teaching vocabulary. There is not much emphasis on vocabulary knowledge rather the mere focus was on the

content and the grammar as well. A study by Horst (2013) observed that teachers assume that students will be adequately exposed to at least the most frequent vocabulary to pick it up effortlessly whereby they typically dedicate their time to grammar. Bhutanese students' vocabulary knowledge is observed to be considerably low. Students' comprehension gets distorted as they encounter many new words in their reading whereby it demotivates them to read. According to Min (2013), for the learner's second language (L2) development it is a must that a good basis of vocabulary knowledge is vital at all stages. Without sufficient vocabulary knowledge, one cannot have good communication regardless of the degree of the students' competency in grammar and pronunciation.

A similar study conducted in 2016 proved that the writing ability of a foreign language strongly interrelates with the knowledge of vocabulary in a foreign language. (Johnson et al., 2016) showed that the high performers of the foreign language writers had greater production of vocabulary in their test scores. The current study would help improve these fundamental skills as vocabulary is a crucial element in acquiring a second language.

Therefore, newer methods and practices must be applied to improve results. Besides, no research on teaching and learning vocabulary has been carried out in the Bhutanese context, considering this research gap, the need for vocabulary in language learning, the present research explores the feasibility of the BU and TD instructional approaches to ESL students' vocabulary learning in Bhutan by investigating the impacts of the two methodologies relying on their degree of L2 vocabulary capability and their general view of the methodologies. With the distinctive advantages of these two

approaches, for example, activating the students' schemata, increasing vocabulary size, and also beneficial vocabulary information, children are expected to acquire needful skills of vocabulary knowledge.

### **1.3 Research question**

1. To what extent can the Bottom-Up instructional approach improve the vocabulary knowledge of secondary students in Bhutan?
2. To what extent can the Top-Down instructional approach improve the vocabulary knowledge of secondary students in Bhutan?
3. Is there any difference in the effect of Bottom-Up and Top-Down instructional approaches on Bhutanese secondary students' vocabulary knowledge?
4. What are students' opinions towards Bottom-Up and Top-Down instructional approaches?

### **1.4 Objectives of the Study**

The study seeks to:

1. Investigate the effects of Bottom-Up instruction on secondary students' vocabulary knowledge.
2. Investigate the effects of Top-Down instruction on secondary students' vocabulary knowledge.
3. Compare the effects of the Bottom-Up and Top-Down instructional approaches.
4. Explore secondary students' opinions toward Bottom-Up and Top-Down instructional approaches.

### **1.5 Statements of Hypotheses**

To confirm that BU and TD instructional approaches are effective, the following hypotheses are formulated:

1. Students' vocabulary knowledge will be improved after implementing the BU instructional approach of vocabulary.
2. Students' vocabulary knowledge will be improved after implementing the TD instructional approach of vocabulary.
3. The difference between BU and TD instructional approaches to students' vocabulary knowledge will be:
  - 1) there is no difference between the two
  - 2) the mean difference of TD is higher than that of the BU instructional approach.
  - 3) the mean difference of BU is higher than that of the TD instructional approach.

### **1.6 Scope of the Study**

1. The participants for this study were seventy English-majored students from a secondary School in Chhukha, Bhutan. They vary in age from 16 to 19 years with different socio-economic backgrounds and the participants fall under the same level of English proficiency which is categorized by the school's policy. The rationale for choosing them is (i) their language proficiency is intermediate, which is suitable for the study, and (ii) their strong motivation to improve their English Language proficiency which would ensure their wholehearted participation throughout the study.



2. The two Independent Variables (IV) were BU and TD instructional approaches, and the Dependent Variable (DV) – students' vocabulary knowledge.

3. The data collection methods were as follows:

(i) Pre-test and post-test

(ii) semi-structured interview

## **1.7 Definitions of Terms**

### **1.7.1 Bottom-up**

BU is a form of inductive (or data-driven). The process starts from smaller and/or lower-ranked units and moves upwards through greater and/or higher-ranked units. In BU processing, the learner “focuses on individual words and phrases and achieves understanding by stringing these details elements together to build up a whole” (Harmer, 1991, p.201). Regarding the BU approach in learning vocabulary, the process includes the stages—from word-forming to defining words and related words, to family words, to phrases and collocations, to sentences, and finally to context.

### **1.7.2 Top-down**

TD refers to deductive form (or schemata-driven) where the processing working in the opposite direction: from higher-to lower-ranked units, (Jay, 2003) In top-down processing, student utilizes the previous information to make presumptions about the content (Lingzhu, 2003). Regarding the TD processing approach in vocabulary learning, the process will be based on the stages from learning words from context to sentences, phrases, and collocations, to family words, to the definition and related words then finally to word-formation.

### 1.7.3 Vocabulary Knowledge

It is the knowledge of a word that besides its definition it also suggests how that word fits into the world, Steven Stahl, (2005, as cited in Diamond and Gutlohn, 2006),

Nation (2013) summarizes 3 main parts of knowledge which are substantial regarding a word in a second language: form, meaning, and use. Different types of knowledge of words that are essential to students for a variation in language tasks have to be covered under vocabulary knowledge. The speaking and writing skills require a different kind of vocabulary knowledge. This study aims for the students to improve the form and meaning of the words.

Similarly, the intended test (vocabulary size test and the updated vocabulary level test) measures written word form knowledge and the knowledge of its form-meaning connection.

### 1.7.4 Secondary Students

They are tenth grade, English-majored students from the secondary school of second languages in Chhukha, Bhutan. They vary in age from 16-19 years and come from different socio-economic backgrounds. 37 females and 33 males participated in this research. The students share similar English proficiency levels.

## 1.8 Significance of the study

Assumed that vocabulary has an important role in today's languages, this study will turn to be useful to society. The growing demand for English-speaking graduates validates the need for a more effective educational approach. Thus, institutes that apply the recommended approaches resulting from the study will guide their students well. Administrators will be assured through what educators have to emphasize in their

curriculum for the improvement of the English performance. For scholars, this research will reveal important areas of the educational process that many researchers might not have explored.



## Chapter 2

### Literature review

A literature review shows the knowledge on the subject. In this chapter, specific elaborations of teaching vocabulary in general, how vocabulary is assessed, and teaching & learning vocabulary in the Bhutanese context are presented.

#### 2.1 Vocabulary Knowledge: Importance of Vocabulary Instruction

Vocabulary knowledge is a vital constituent of a language, especially in second language students. There are various viewpoints on this aspect for example (Richards & Renandya, 2002), suggest that vocabulary is an essential constituent of linguistic skill that provides a considerable basis. It determines how fluent students speak, how well students listen and assess their reading and writing. Neuman and Dwyer (2009), describe vocabulary as the words we should be familiar with to interconnect efficiently: the words we use while we speak (expressive vocabulary) and words use while listening (receptive vocabulary). Further, O'Dell et al. (2000) state that vocabulary can be understood as a significant component in teaching language, demanding tests to check the vocabulary learning progress of the students and to assess how abundant their vocabulary is to fulfill their communication requirement. Furthermore, Linse and Nunan (2005), also defined that vocabulary as the collection of words that one recognizes.

In nutshell, from the definitions mentioned above, it can be summarized that vocabulary is the knowledge of words and words' meanings. Vocabulary is also a list of words organized in alphabetic order with their definitions.

Despite its importance, it is surprising that there is not much attention in vocabulary teaching and learning in English language teaching contexts. This is exemplified in the claim made by Carter and McCarthy (2014) that for years, some researchers have discriminated against vocabulary and well-thought-out that syntax to be an extra significant matter in the process of developing language.

Marulis and Neuman (2010), for example, “vocabulary is at the heart of oral language comprehension and sets the foundation for domain-specific knowledge and later reading comprehension” (p. 300). Meanwhile, Folse (2011) states that among many components, vocabulary is the most crucial factor in learning a foreign language. Further, to understand the procedure of obtaining language learning, vocabulary in L2 language contexts would be helpful. The study by Arvizu (2017) suggests that to ensure students’ comprehension of the content presented in the stories, pre-teaching of vocabulary in the stories is important. Ghazal (2007) brings up that jargon is fundamental to language and is of incredible criticalness to language students. So, the students ought to become familiar with the jargon more to achieve English. Similarly, Bromley (2004) in his study, summarized that vocabulary knowledge helps to progress reading comprehension skills and fluency, boosts thinking and communicating skills, and accelerates their achievement in academics.

## **2.2 Vocabulary learning strategy (VLS)**

Vocabulary learning strategy (VLS) is thought to be a tool that students use to gain vocabulary, which is the utmost vital element of English as a Foreign Language (EFL) or ESL learning. Students might engage in different learning strategies that they

accept to be operative ways of vocabulary acquisition. Effective students use more strategies than ineffective students do (Goundar, 2016).

Even though vocabulary teaching is the utmost substantial part of a language or English educational program, the discussion for receiving a perfect teaching method for teaching and learning vocabulary proceeds. The value of all learning systems including VLSs is to encourage students to assume responsibility for their own realizing with the goal that they can assume liability for their investigations. Purwanti et al. (2015) found the existence of a great association between students' strategies and their vocabulary achievement. A survey carried out by Zou and Zhou (2017) summarizes that students utilize several varieties of VLS to balance their traditional repetition learning approach. The study has highlighted that the mindful use of several strategies has enabled the students' vocabulary learning.

According to Gang (2014), less capable college students in China used repetition and association strategies at the utmost frequencies in learning vocabulary but the more capable students mixed the strategies and used them more steadily. This study suggested that variety and steady use of strategies are supportive to successful vocabulary learning. (Bakti, 2018) studied 50 high school students' vocabulary learning strategies in Indonesia. The author found numerous approaches that she grouped according to a classification proposed by Schmitt (cited in Bakti, 2018). The most frequent strategies observed were predicting meanings from the setting, looking for help from friends or teachers about the meanings, learning, and focusing to the target words. Nevertheless, nobody described using internet-based or other applications.

According to Nazri et al. (2016), great semantic students use their strategies often, utilize more metacognitive systems than psychological methodologies, and

utilize more straightforward than aberrant techniques. Simultaneously, Askar (2016) directed a study among 466 college understudies in Kurdistan and found that intellectual procedures were the most oftentimes utilized systems, trailed by memory techniques, metacognitive methodologies, and social techniques. In the meantime, guaranteed based on their investigation that after getting preparing in learning methods, schoolchildren utilized procedures classified into three: metacognitive, intellectual, and social. Another study by Kulikova (2015) studied the vocabulary learning tactics of 97 Russian students in the United States' university. The author learned that the most mutual strategies were the use of dictionaries, predicting, keeping notes, and practicing through recurrence. Doing contextual encoding, activation, and affective were some of the strategies reported by students.

A study by Schouten-van Parreren, 1989 as cited in Lee and Yoon (2019), claimed that the approach aided students to remember the words for a longer time and expand their lexical knowledge. 73 participants (59.8%) claimed that the BU or TD instructional approach was a more productive way than rote learning to enhance their vocabulary knowledge. Parallel to this study, Moskovsky et al. (2015) witnessed that both the BU or TD groups had important improvements in the accomplishment of English vocabulary knowledge in terms of receptive and productive vocabulary. Considering all of these facts, its an indication that the instructional methods implemented in the current study would turn out to be operative in accomplishing substantial learning outcomes.

### **2.3 BU or TD instructional approach of vocabulary**

The idea of BU or TD processing is used in numerous grounds, these include processing psychology, intellectual science, pedagogics, and established management. These are two diverse means of dealing out or organizing information. In broad, BU refers to inductive (or data-driven) process that starts with smaller and/or lower-ranked units and moves up through bigger and/or higher-ranked units. In BU process, the learner “focuses on individual words and phrases and achieves understanding by stringing these details elements together to build up a whole” (Harmer, 1991, p.201). TD is a procedure of deductive (or schemata-driven) process taking in the reverse direction: from advanced to simple units (Jay, 2003). In TD processing, the students utilize the earlier information to make presumptions about the content (Lingzhu, 2003).

The BU or TD methodology indicated a notable increase in the accomplishment of vocabulary in English, not only the vocabulary size but also beneficial vocabulary information. According to the study by Moskovsky et al. (2015), academic vocabulary program that was explicitly developed for EFL the study turn out to be relatively operational in accomplishing very good learning outcomes, with the use of any of the two methods. BU or TD also has a educational dimension. Teaching techniques can be considered using as either BU or TD or mixed (Olshtain & Celce-Murcia, 2016). It is realistic to accept that L2 teaching which is associated with the students’ favored mode of processing would be more real.

In the study conducted for Students in China (Moskovsky et al., 2015), among the two instructional approaches, the BU instructional approach worked slightly better



with the targeted EFL students. It was examined that the students seemed to support the BU instructional approach than the TD instructional plan.

A study by (Moskovsky et al., 2015) the lesson involved six distinct steps (or events):

- Step1: Introduction of the speaking and writing form, also the morphemic construction, of the word.
- Step 2: Presenting the word definition and translation in LI of the target word.
- Step 3: Familiarizing related forms from the same word family.
- Step 4: Introduction of diverse phrases and comparations of the target word.
- Step 5: Giving the target word at the sentence.
- Step 6: Bringing the target word at the context level.

Participants will be exposed to 24 sessions each for the BU and TD instructions. The BU instructional approach will be carried out with steps from 1 to 6 as above. During the TD sessions of instructions will be in the reversed order, from steps 6 to 1.

#### **2.4 Vocabulary knowledge**

Different researchers define vocabulary knowledge in various ways. (Nation, 2001; Ringbom, 1987) define it as a knowledge of written and spoken form, morphological information, information of word meaning, connotations and related knowledge, and information of social or other constraints to be taken care of in the use of the word.

Nation (2001) suggested 18 queries grouped into three sorts, each group contains receiving and producing aspects:

- (a) form, including spoken form, written form, and word parts
- (b) meaning, including form and meaning, concept and reference, and associations; and
- (c) use, including grammatical functions, collocations, and constraints on use, such as register and frequency.

Hence, it's felt to consider that students need to acquire Nation's essential components of vocabulary knowledge like form, meaning, and use. However, since the vocabulary assessment tool used in this research does not really measure the 'use component', the form and the word meaning were practiced explicitly through the profound steps of BU and TD instructional approaches.

## **2.5 Assessing Vocabulary**

It is essential to assess vocabulary knowledge for both language teachers and students. The assessment helps to find out the growth of a course, or assess the vocabulary size of students as part of overall language proficiency. Coxhead (2018) claims that information of a word that should be confirmed are word meaning, correct spelling, usual associations, enunciation and stress, its usage, the structural characteristics it has, its replacements and antonyms, parts, or sections, and its cognates. Similarly, in this research, the focus will be on vocabulary size as the assessment has shown to guess success in the reading area, writing sections, and general language skill and academic accomplishment as well (Laufer, 1997; Saviile-Troike, 1984). The assessment of vocabulary covers word levels from 1000-5000 measuring knowledge of vocabulary.

### **2.5.1 The Vocabulary Size Test (VST)**

The VST is a commonly used test (Nation & Webb, 2011; Nation & Coxhead, 2014). This test deploys a multiple-choice presentation planned to assess the written receptive vocabulary size which is the vocabulary knowledge obligatory to students in the area like reading. To test the second and foreign language students and L1 English speakers, versions including word families from the first 1,000 to the 20,000- from the BNC, and these versions are used.

### **2.5.2 Vocabulary Levels Test (VLT)**

VLT was developed by (Nation, 2013; Schmitt, Schmitt, & Clapham, 2001). This test intends to measure the receptive knowledge of words from 2,000 - 5,000, and also 10,000 frequency levels in English, as the AWL (Coxhead, 2000). It includes a format to match the words and also a brief definition. Frequently, the test is planned to set educational targets which will be a useful tool for instructors by sharing the outcomes of the test with their pupils to assist with the goal set up and improve an understanding of the categories of English vocabulary.

### **2.5.3 Controlled Productive Knowledge Test (CPKT)**

Productive vocabulary ability has to infer some degrees of information. as an example, a learner is also ready to deliver a sentence with an infrequent word when tested by the instructor, but be unwilling to practice on his own devices. The reluctance shown by students is usually due to doubt to use the word, to put it in a different way, an absence of confidence may replicate imperfect knowledge.

### **2.5.4 The Updated Vocabulary Level test**

This updated vocabulary level test (UVLT) was developed by (Webb et al., 2017). The updated form measures vocabulary knowledge from levels 1000 -5000. The test items in this test were obtained from Nation's (2012) BNC/COCA word lists. One of the values of this UVLT is that the word occurrence level for the students to concentrate their learning is indicated. The test includes a matching format of 30 questions in each level. There are 10 groups of six words (3 each of key and distractors) with 3 definitions at every level. The test takers are expected to inscribe the right word beside the word definition.

### **2.5.5 The New Vocabulary Levels Tests (NVLT)**

This NVLT was created by (McLean et al., 2015). According to the authors, this NVLT is proposed as an investigative and attainment instrument for pedagogical or research uses. It evaluates information of words in English from the first five 1,000-word occurrence levels of the BNC and the Academic Word List (AWL) (Coxhead, 2000). There are five 24-item levels meant to evaluate knowledge of the utmost

common 5,000-word families. It also includes a thirty-item section that measures knowledge of the AWL.

The vocabulary test tools specifically, the VST (Nation & Webb, 2011; Nation & Coxhead, 2014) and the UVLT (Webb et al., 2017) are included in the pre-test and post-test to evaluate the students' vocabulary knowledge in English. The VST is implemented to evaluate the first language and second language students' vocabulary size in written English. This test evaluates written word form, the form-meaning connection, and use.

For the VST, the participants have to circle the closest meaning of the keyword among 3 other distractors in the question. There are 20 words (10 each from 2000 level and 3000 level). In the UVLT, the students need to check (✓) the word that best fits the definition. For every meaning of the word, there are 5 other distractors. This test comprises 30 academic words falling in a 3000-word level. The participants are assessed for 50 words in total. The two tests (UVLT and the VST) evaluate the form and meaning. The tests will be administered at the beginning and the end of the experiment.

## **2.6 Education system in Bhutan**

Bhutan established its first school in 1914 and came over its first modern education system with the start of the First Five Year Plan (FYP) in 1961 which was targeted at expanding and improving human resources and the fundamental educational needs that were must for the country's socio-economic development (MoE, 2018). Bhutan is geographically a small country and the modern father of Bhutan the third King Jigme Dorji Wangchuk sensed the need to interconnect Bhutan with other

countries of the world. The king thought to adopt the medium of English in schools in 1962. For this purpose, the king invited Father William Mackey, the Canadian Jesuit to assist in setting up English medium schools (ibid). The medium of teaching for other subjects in Bhutan is English and it is studied as a main subject and function (Dorji, 2005; LaPrairie, 2014).

Although Bhutanese children are exposed to the English language from an early age, scholars have claimed that the speaking skills in English are very poor (Dorji, 2005; LaPrairie, 2014). In the fields of languages, Bhutan enjoys more than nineteen diverse varieties of languages, and among these nineteen varieties sixteen languages are entirely oral. These varied languages offer a chance for the students to interconnect in their comfortable language (van Driem, 2017). Therefore, the English-speaking habits are obstructed due to the ruling mother tongue whereby hinders their vocabulary achievement and fluency in speaking English (Nanthaboot, 2014).

The developmental changes like NAPE (New Approach to Primary Education) were introduced in the system between 1986 and 1998. It was also mentioned that before NAPE started, "learning was mostly by rote" and "classroom methods were controlled by chalk and talk restraining children's creativity" (Choden, 1990). Collister and Etherton (1991) state that "the methods of rote learning were transferred, in part, from monastic school", which did not fit with the learning requirements of the modern system. Some children expressed that the old method was not interesting because they had to study all the time and did not have any activities, any experiments, or any enjoyment or have to study unknown things before they have seen them (Harley 1993).

In most schools in Bhutan, teachers use traditional direct methods to teach and convey knowledge and skills. According to a study by LaPrairie (2014), the practice of

teaching and learning in Bhutan is deeply positioned to old-style and memorization methods. Rabgay (2018) states that "this teaching method uses few innovative teaching methods and is not constructive" (p.266). According to Wangmo (2019), teacher-centered instruction in Bhutan has brought poor students English proficiency. Therefore, new techniques and techniques need to be used to progress the results.

Revising teaching approaches by inspiring teachers to use advanced and interactive teaching procedures corresponding with traditional memorization by affected authorities and stakeholders would address such issues. LaPrairie (2014) recommended teachers to learn the finest instructing methods for teaching English as a Second Language (ESL). Learning would be difficult with that medium of instruction if students are not familiar with a second language. Hoover et al. (2015) emphasize that teachers need to identify and make suitable educational modifications for ESL classrooms. The insufficient progress is caused due to improper changes and applications.

A study of English education by Piller and Skillings (2005) shows that effective education for English students is the acquisition of natural language through activities that focus on the child's daily experience, reading, repetition, knowledge and practice. (Lackman, 2010; Ma, 2015) argue that vocabulary is one of the subskills of speaking in general, and without one of the subskills it affects other skills.

Vocabulary is the utmost significant part of the language system since it is the foundation for language growth. It is also known as the building block of language, and it should be noted that no language acquisition can take place without vocabulary development (Nie & Zhou, 2017). As a result, vocabulary is crucial in learning a language. It is the utmost significant part in communicating with others (Kuzyk et al.,

2020), and it has a significant impact on language speakers' language competence since a lack of relevant and sufficient vocabulary knowledge can make it difficult to understand others or transmit meaningful thoughts. A large vocabulary is always viewed and valued as a benefit. Even in the mastering of a language, text comprehension, or production, vocabulary learning is well recognized for its critical function in commanding one's vocabulary knowledge (Teng, 2015). As a result, students should thoroughly familiarize themselves with a word's pronunciation, meaning, spelling, register, frequency, and morphology, syntax, and collocational aspects (Abdulloh, 2021; Read et al., 2021).

Hence, the component of vocabulary is more pertinent to high-end the overall Bhutanese students' English. therefore, this study is intended at suitable and effective vocabulary learning methods to further expand students' English.

Therefore, seeing numerous loopholes in ESL teaching strategies in the Bhutanese context, the distinct benefits of this BU and TD instructional approach of vocabulary teaching are likely to gain more skills in learning vocabulary to comprehend better. Moreover, to date, no study has been identified in the area of teaching vocabulary and specifically investigated the beliefs and attitudes of Bhutanese students concerning vocabulary teaching and learning. Hence, investigating a of a group of Bhutanese students' attitudes would supplement earlier studies, and complement to the academic and specialized understanding of what students think about basic aspects of vocabulary learning and teaching.



## 2.7 Frame work of the study

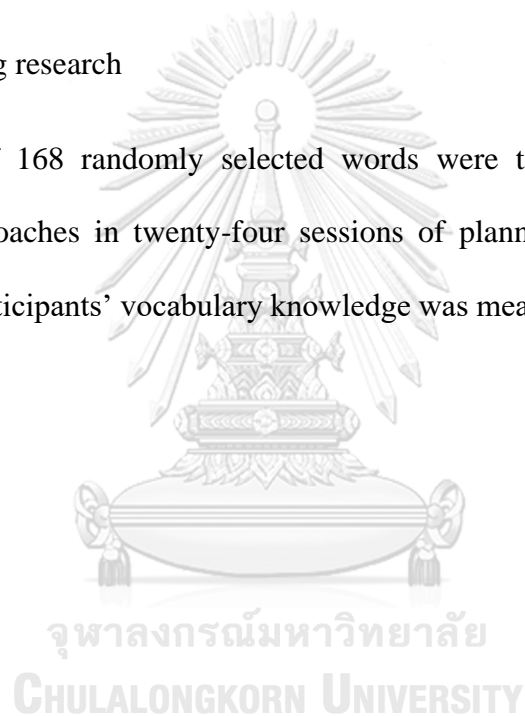
The outline of this study was based on the BU and TD approaches of teaching vocabulary which includes:

1. Planning/selecting a topic

Students learned 168 words from Coxhead's academic word list in eight weeks. The vocabulary teaching was of twenty-four sessions/lessons in each of the approaches.

2. Conducting research

A total of 168 randomly selected words were taught using two separate instructional approaches in twenty-four sessions of planning for each instructional approach. The participants' vocabulary knowledge was measured by conducting a pre-test and post-test.



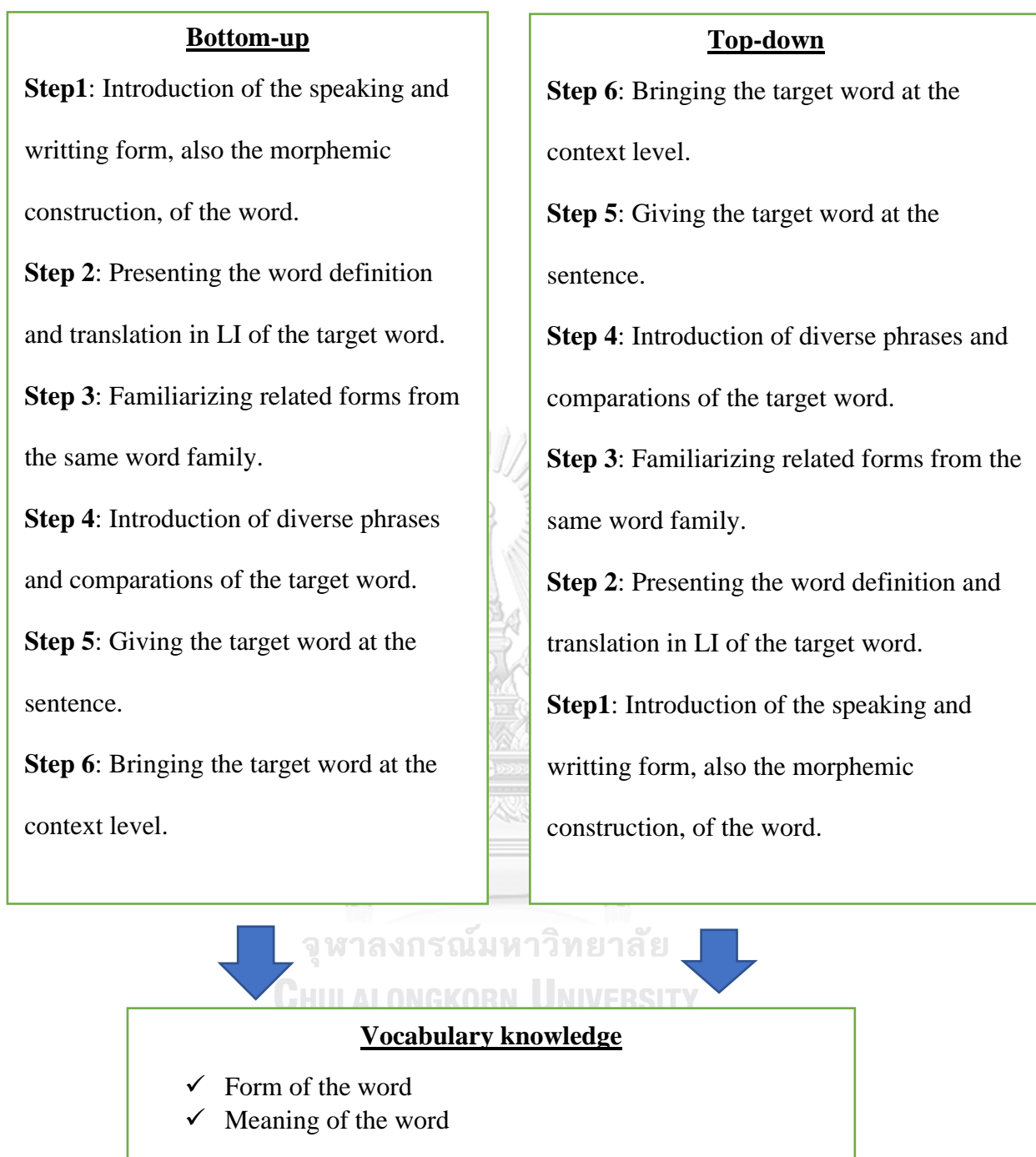


Fig. 1. A research framework

## **Chapter 3**

### **Methodology**

#### **Introduction**

This chapter includes research method used to conduct the study. It explains the procedures of collecting necessary data and information. The chapter discusses how these data address the research objectives and questions. Furthermore, the items like reasons and justifications of design, research instruments, data collecting techniques, data presenting techniques, and analytical techniques are elaborated hereunder.

#### **3.1 Research design**

This study included gathering pre-test, post-test research structures to explore the effects of the BU and TD instructional approaches of learning vocabulary with Bhutanese secondary students. The research experiment was expected to bring changes in the needy variable (s) brought about by the autonomous variable(s), which is/are otherwise known as the intervention(s), and the progressions are estimated through the examination of the distinctions in the free variable(s) pre- and post-intercession (Kumar, 2019). In this research, the Independent Variable (IV) was BU and TD methodologies guidance of vocabulary, and the Dependent Variable (DV) – students' vocabulary knowledge.

## **3.2 Population and sample**

### **3.2.1 Context**

A boarding school by type, Pakshikha Central School was established in 2011 which is one of the exemplary schools in the province today in every discipline. It is a central school established in the south-west of the country. This school also serves as the parent school to many other schools nearby. The school with thirty-one sections provides a challenging but supporting platform to one thousand and thirty-three students (enrollment statistics 2020) broadening their horizons, enhancing their critical and analytical thinking, and shaping them into better humans.

Generally, schools in Bhutan provide lessons that cover subjects like Maths, Science, History, Geography, Economics, Accountancy, Dzongkha (national language), and English as a medium of instruction except for the national language.

### **3.2.2 Participants**

70 secondary students from Chhukha, Bhutan were chosen as the participants of this research study. The age group of the population ranged from 16 -19 years, and they were from diverse socio-economic backgrounds. These participants had similar ages, educational backgrounds, and share the same English proficiency. This study had two separate groups forming thirty-seven students in BU instructional group and thirty-three students in TD instructional group.

### **3.2.3 Sample size**

The intended sample of this research was two sections of secondary students comprising a mix of males and females of 70 volunteers which involved convenience sampling.

### **3.3 Instructional instrument**

A series of lesson plans for 48 sessions were developed as the instructional instrument in this study which lasted for eight weeks. The example illustrated in Appendix D. The plan included:

#### **3.3.1 Planning/selecting a topic**

To investigate this study, 8 weeks-long periods of English scholarly vocabulary courses were requested from the administrators at the school where I worked (described in the context). The structure of the course prospectus was generally driven by Coxhead's (2006) and Nation's (2007) thoughts regarding vocabulary instruction. The vocabulary words for this investigation will be selectively chosen fitting the secondary students' literature (intermediate level:3000 words level). The vocabulary course included forty-eight hours of actual ESL scholastic vocabulary guidance for eight-week long instruction. The guidance was conveyed as per the exercise plan executed.

### **3.4 Research procedure**

Forty-eight sessions of actual instructional activities were conducted on academic vocabulary using two distinct approaches in two separate groups. The BU group comprised thirty-seven participants and the TD group thirty-three. A pre-test was administered a day before the actual treatment session followed by the posttest.

There were twenty-four sessions of vocabulary learning and teaching for each of the instructional approaches taking alternative days of instruction of eight weeks. Each session was structured for an hour of instruction making up forty-eight hours of vocabulary instructions in total. A sample of the tentative timetable is illustrated in Appendix 5.

### **3.5 Research Instruments**

#### **3.5.1. Vocabulary Test.**

The size of the academic English vocabulary knowledge test were assessed quantitatively with two different vocabulary test instruments, the Vocabulary Size Test (VST) and the updated Vocabulary Levels Test (UVLT). The tests were managed at the beginning and the end of the instructional approach. The same set of pre-tests and post-tests involve fifty different academic words following the participants' level of proficiency. The VST involved 20 multiple-choice items and the UVLT tested 30 multiple-choice items. These selected words were from the list of academic words taught during eight full weeks of vocabulary instruction. The example is illustrated in Appendix 4.

#### **3.5.2. Interview Protocol.**

Four participants from the BU instructional approach and four from the TD instructional approach were chosen to take part in the interview. The interviewees were selected based on the result of the post-test; two high achievers and two low achievers from both BU and TD instructional approaches. The interview questions were directed in both English and Dzongkha (L1) to extract exact data from the members. The

interview questions were figured out based on the research questions to check the members' opinions toward two different vocabulary learning approaches.

The data collected was analyzed and transcribed to make replicable and valid inferences by interpreting and coding textual material. To increase the credibility of qualitative data the '**Member checking**' or which is also called respondent validation technique was involved. Data or results were returned to participants to check for accuracy and resonance with their experiences. An example of an interview question is illustrated in Appendix 3.

### **3.6 Validation of the instruments**

The validity of the instructional and examination instruments will be estimated through development and substance legitimacy, which is proof that underpins validity whether the instruments (1) requires the members to play out the conduct that is being estimated and takes advantage of the build as characterized (Brown and Abeywickrama, 2010). One suitable way to deal with gauge substance and build legitimacy is the Expert Judgment wherein five specialists, at any rate, must be welcomed to make decisions of everything utilizing the Item Objective Congruence (IOC) file (Laksana, 2016). Therefore, in this examination, substance and build legitimacy were surveyed by 3 specialists within any event 5 years of English showing experience through the methods for the Index of Item Objective Congruence (IOC). A rating scale assessment with three focuses (- 1 = incongruent, 0 = Questionable, and 1 = Congruent) were given to the specialists. From the outcomes from the specialists, mean scores were determined. The things in the IOC structure that did not have a score from 0.5 to 1 were changed depending on the specialists' proposals.

After the specialists have made the remarks, changes were made to the instructional and exploration instruments. At that point, the instruments were directed with a gathering of participants with comparable qualities.

### 3.7 Data collection procedure

The targeted participants were formed into two separate groups of the BU instructional approach group and the TD instructional approach group. They were asked to take the pre-test in the first meeting. After the pre-test, both groups took eight weeks of vocabulary instruction using the BU and TD instructional approach on alternative days. Once the treatment session was completed the participants took the post-test on the following day. After that, eight participants (4 each from BU and TD) joined the semi-structured interview to explore their opinions toward the vocabulary learning approaches.

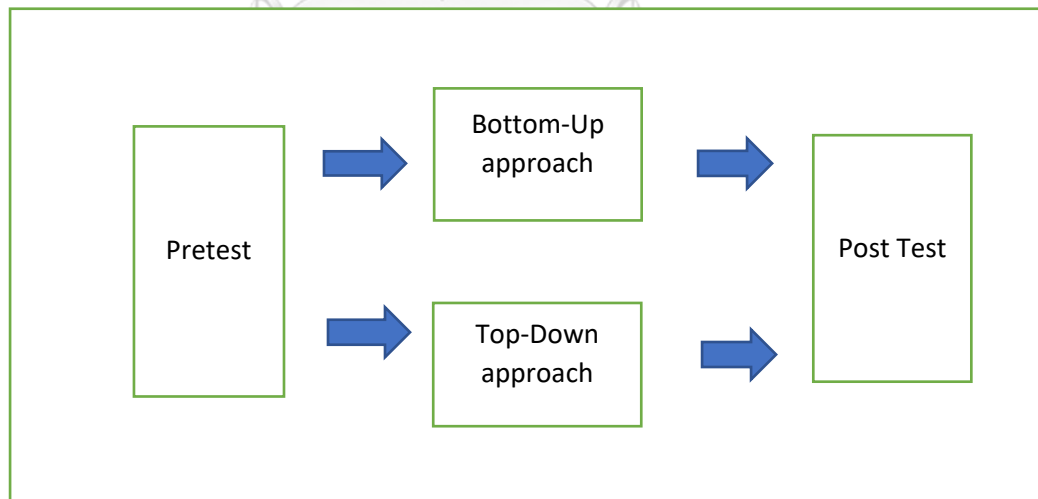


Fig.2. Data Collection Procedure



### 3.7.1 Pre-test

- Participants carried out the test that included the vocabulary size tests (VST) and the updated vocabulary level test (UVLT). The example is illustrated in Appendix 4.

### 3.7.2 Post-test

- Participants carried out the test that included the vocabulary size tests (VST) and the updated vocabulary level test (UVLT). The example is illustrated in Appendix 4.

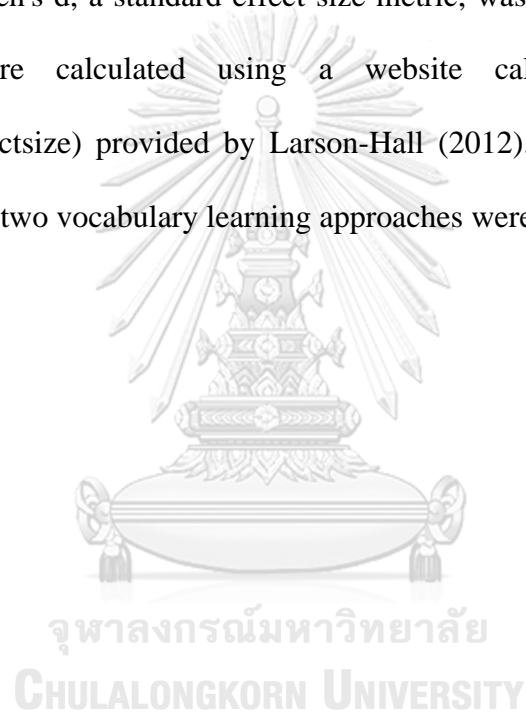
### 3.7.3 Semi-structured interview

Four participants from each instructional approach (BU and TD) based on the post-test results (two high achievers and two low achievers) attended the semi-structured interview.

## 3.8 Data analysis

The collected test scores data were exposed to a range of descriptive and inferential statistical studies. For the analysis of the data, the researcher calculated the mean scores of students scores in the pre-test and post-tests of the VST and the UVLT. To gain insight into the specifics of the differences, the general significance effects and interactions in the ANOVAs were followed up with within-group (paired samples) t-tests. To compare the effectiveness of the two instructional approaches, an independent sample t-test was conducted. The results of the interview questions were analyzed through content analysis.

The test results were analyzed using the SPSS statistical package, version 25.0. The scores in each vocabulary test were calculated to be a total of 50. Next, descriptive statistics were calculated, and then *t*-tests were performed to check for any statistical differences under the variables of pre-test and post-tests of the two instructional approaches. On this test, effect sizes were also considered for each variable to reflect "the extent of the independent variable's impact on the dependent variable" (R. B. Kline, 2004, p. 97). Cohen's *d*, a standard effect size metric, was utilized in this study, and effect sizes were calculated using a website calculator ([www.cognitive-flexibility.org/effectsize](http://www.cognitive-flexibility.org/effectsize)) provided by Larson-Hall (2012). Finally, the participants' perceptions of the two vocabulary learning approaches were analyzed and interpreted.



## Chapter IV

### Result

This chapter reports the data collected from the pre-test, post-tests, and the students' opinions towards the effects of vocabulary instruction using BU and TD instructional approaches on Bhutanese secondary students' vocabulary knowledge. Both the quantitative and qualitative findings of the study were divided into two parts under the research objectives and hypothesis.

#### 4.1 Results of Research Question 1

**To what extent can the bottom-up instructional approach improve the vocabulary knowledge of secondary students in Bhutan?**

This research question determines whether the BU instructional approach improved the vocabulary knowledge of secondary students through vocabulary tests. To address this research question, VST and UVLT, with a possible 50 points, were used to evaluate several aspects of students' vocabulary knowledge. To examine the improvement of students' vocabulary knowledge, a comparative analysis between the mean scores of the pre-test and post-test was conducted. The results of the statistical analysis comparing the pre-test and post-test scores test of each vocabulary instruction were presented below.

### Comparison of Pre-test and Post-test Scores

In this section, descriptive statistics of dependent variables from pre-test and post-test were computed. Also, standard deviations, t-values, and statistical significance were calculated. The results of the statistical calculation are illustrated below.

Table 1

*Pre-test and post-test mean scores of BU instructional approach*

Vocabulary	n	Mean	SD	Mean	df	t	sig	Effect
Test		( $\bar{x}$ )		Difference				Size
Pre-test	37	23.91	8.53					
				8.25	36	9.96	.000	1.64
Post-test	37	32.16	8.25					

\* $p < 0.05$

Based on the data in Table 1, it specifies that the mean of the students' scores in their post-test ( $\bar{x} = 32.16$ ,  $SD = 8.25$ ) was higher than that of their scores in the pre-test ( $\bar{x} = 23.91$ ,  $SD = 8.53$ ), and this difference in the performance between the pre-test and post-test was statistically significant ( $t = 9.96$ ,  $p < 0.05$ ). Given statistically significant improvement in each students' score, it reflects the evidence that the students improved their academic vocabulary knowledge significantly after taking the academic vocabulary course using the BU instructional approach.

In addition to the statistical difference judged by the  $p$ -value, the values of effect size were also calculated to measure the magnitude of the effects of vocabulary instruction.

In this study, the mean effect size correlation of the paired-sample t-test which was calculated using Eta square revealed a value of 1.64 (large). This suggests that the effect size was moderately large according to (Cohen, 1988). This can be interpreted to that the academic vocabulary instruction in the Bhutanese tenth graders had a huge effect on improving students' vocabulary knowledge.

#### 4.2 Results of Research Question II

##### **To what extent can the top-down instructional approach improve the vocabulary knowledge of secondary students in Bhutan?**

The mean scores of pre-test and post-test of the TD instructional approach were studied and presented in table 2.

Table 2

*Pre-test and post-test mean scores of TD instructional approach*

Vocabulary Test	n	Mean ( $\bar{x}$ )	SD	Mean Difference	Df	T	Sig	Effect Size
Pre-test	33	24.21	5.97					
				7.34	32	6.30	.000	1.10
Post-test	33	31.55	6.99					

\* $p < 0.05$

In Table 2, the mean of the students' scores in their post-test ( $\bar{x} = 31.55$ ,  $SD = 6.99$ ) was higher than that of their scores in the pre-test ( $\bar{x} = 24.21$ ,  $SD = 5.97$ ), and this difference in the performance between the pre-test and post-tests was statistically significant (t

=6.30,  $p < 0.05$ ). The effect size of these mean scores of pre-test and post-tests is valued at 1.10 (large). Hence, this is the statistical evidence to suggest that the students improved their vocabulary knowledge significantly after taking the academic vocabulary course using the TD instructional approach.

### 4.3 Results of Research Question III

Is there any difference in the effect of the BU and the TD instructional approaches on students' vocabulary knowledge?

To study the effect of BU and TD instructional approaches on students' vocabulary knowledge the independent sample t-tests between the post-tests of two different instructional approaches were run as shown below.

**Table 3**

*Independent sample t-test of the effects of the BU and TD instructional approaches*

Vocabulary Test	n	Mean	SD	Mean Difference	df	t	sig	Effect Size
BU	37	8.25	5.03					
				0.91	68	0.65	0.22	0.15
TD	33	7.34	6.99					

\* $p < 0.05$

As indicated in Table 3, the means of the improvement in the test scores were ( $\bar{x}$  =8.25, SD =5.03) and ( $\bar{x}$  =7.34, SD =6.99) for the BU and TD instructional approaches respectively. The mean difference of the improvement was only 0.91 and it was not statistically significant. This revealed that neither of the instructional approaches was more effective than the other.

#### **4.4 Results of Research Question IV**

##### **What are students' opinions towards BU and TD instructional approaches?**

This research question investigated the students' opinions regarding the instructional approach to learning vocabulary. To address this research question, 7 questions were constructed to interview a total of 8 students (four from each instructional group) at the end of the course (week 8). The interviewees were selected based on their pre-test and post-test scores. There were 50 possible scores for both pre-test and post-test. The selected students were divided into four groups (2 each of high and low achievers from BU and TD group).

The keywords that appeared most frequently in the answers during the interview were coded, recorded, translated into English, and presented below. The students' responses towards BU and TD instructional approach of learning vocabulary were categorized and summarized under the aspects: Students' feelings towards the BU/TD instructional approaches, Advantages and disadvantages of the BU/TD instructional approach, and Comments & feedback.

## 4.5 Summary of Interview Responses

### 4.5.1 Students' feelings toward the two vocabulary learning approaches

All the eight participants who were interviewed perceived both approaches as helpful, useful, and interesting strategies through which they attained and expanded their vocabulary knowledge. A student said, "I found the BU instructional approach very interesting through which I learned many useful academic vocabulary." It was reported that such approaches with six explicit stages were new and benefited them with a new approach to tackle new words henceforth. Another student reported, "I never experienced such a vocabulary learning approach before. I learned vocabulary through the translation of mother tongue and also with the help of the dictionary." According to the report, all students responded that they placed heavy reliance on learning vocabulary by memorizing the L1 meaning of the target English words. Some of them added that they used a dictionary to look for the meaning. This confirms the interpretation by (Chin, 2002; Crow & Quigley, 1985; McKeown, 1993; Nist & Olejnik, 1995) that vocabulary learning has been largely conducted on a word-by-word basis in ESL settings.

Generally, the participants from both instructional approaches reported that the strategies practiced were found to be effective in learning vocabulary. One of the students claimed, "I felt that the TD instructional approach of learning vocabulary was effective and meaningful as I was exposed to many unknown lexical families of a target word." Furthermore, the participants also reported that the effectiveness of the instructional approaches can be related to the enhancement of reading and speaking abilities. A student from the TD instructional group said, "I learned a good number of unfamiliar academic words which helped me comprehend well and speak confidently."



However, some participants also reported some shortcomings of the approaches. “I did not like the activity part the most as it consumed a lot of time and have a lot of details that confused me a lot,” claimed a student.

#### **4.5.2 Advantages of the BU instructional approach**

The interview reports claimed that the BU approach had huge advantages for the students. The students expressed that the approach helped them learn vocabulary explicitly and helped them remember it for a longer time. “When I forgot the target word I tried to think of its lexical families through which I could easily recall and remember the new target vocabulary”, a student reported. The participants pointed out that through such approaches they got more opportunities to explore and learn related words from the lexical family of the target word.

#### **4.5.3 Disadvantages of the BU instructional approach**

A few respondents from the low achiever group described this approach as a lengthy process that took a long time to learn the meaning of just one word. A participant also mentioned that the activities were confusing because they had to think of a lot of details of a particular word (lexical family, collocations, spoken and written form).

#### **4.5.4 Advantage of TD instructional approach**

The approach not only increased their academic vocabulary knowledge but also motivated them to learn more words. A student from the high achiever group stated, “the activities were interesting and motivated me to learn more new academic vocabulary.” A respondent from a high achiever group expressed that one of the

advantages was differentiating the meaning of words at the context level. A student from the low achiever group enjoyed learning phonetic symbols which she expressed as a useful technique to learn pronunciations.

#### **4.5.5 Disadvantages of TD instructional approach**

The respondents from the low achiever group of TD instructional approach found it a complicated process to follow the steps. Some respondents claimed that it was a tiresome lesson learning seven words in a session. They expressed that it might be more convenient for them to learn the meaning directly rather than going through all the processes. A student said, “although it was helpful, sometimes I feel the steps were so long talking about all the details and sometimes confusing too.”

#### **4.5.6 Comments & feedback on BU/TD instructional approaches**

While seeking feedback on the instructional approaches they took for forty-eight sessions, the respondents described that the instructional approach they experienced helped them expand their vocabulary knowledge which they did not usually get in a normal class. It was reported by a participant taking the BU group that the approach was suitable for learning vocabulary with the stages moving from simple to complex. In addition, the interviewees of the low achiever from the TD group stated that through these approaches, they gained a lot of tips and tricks to guess the meaning of an unfamiliar word, especially at the context level. Some respondents recommended having such effective approaches in class while learning new words. A participant mentioned, “It will be of great help for the students if teachers could teach such vocabulary learning approaches in the class, not just the grammar and the content while teaching stories and poems.” A few mentioned that the teaching and learning activities

were meaningful and interesting. However, some respondents from both groups (BU and TD) also criticized the approach which they felt was time-consuming and tiresome methods.

#### **4.6 Conclusion**

According to the research questions, the findings in this study were: the participants in both the groups had experienced a huge expansion of their vocabulary knowledge after attending the BU and TD instructional approach for forty-eight sessions. There was a drastic change in the performance ratings in their post-test. Both the BU and TD's instructional approach of learning vocabulary yielded a good result in the attainment of vocabulary knowledge.

All the participants reported that having studied vocabulary through BU and TD approaches they gained a lot of knowledge on vocabulary and vocabulary learning tips at large. Although such approaches instilled motivation in learning new academic words, some activities appeared slightly complicated and tiresome to some of the participants in the TD group.

## CHAPTER V

### DISCUSSION AND CONCLUSION

This study tried to investigate the Effects of Vocabulary Instruction Using Bottom-Up and Top-down Instructional Approaches on Bhutanese Secondary Students' Vocabulary Knowledge. The chapter presents the summary of the study, pedagogical implications, suggestions for further research, and limitations.

#### 5.1 Summary of the study

In this study, the researcher intended to study the extent to which the BU and the TD instructional approach improve the vocabulary knowledge of secondary students in Bhutan. The study also tried to explore the difference in the effect of BU and TD instructional approaches on secondary students' vocabulary knowledge and finally, students' opinions towards BU and TD instructional approaches.

The study stretched out for two months experimenting on a total of 70 Bhutanese secondary students. The participants were formed into two separate groups (BU and TD) and instructed through different approaches. Their vocabulary knowledge was assessed through pre-designed vocabulary tests by Nation & Coxhead, 2014 and Webb et al., 2017. Besides the pre-test and post-test, the questionnaires were used to investigate the opinions of the participants on these vocabulary instruction approaches. Only eight students attended interviews for approximately ten to fifteen minutes each. The participants were selected based on the criteria as discussed under methodology.

The quantitative data revealed that the participants' vocabulary knowledge was expanded massively through the BU and the TD instructional approaches. In the comparison of the two approaches, both the instructional approaches helped expand the vocabulary knowledge although neither of the instructional approaches was more effective than the other.

Through the qualitative data, the participants reported that having studied vocabulary through such vocabulary learning instructions they not only expanded their vocabulary knowledge but also gained more tricks and tips to tackle a new word. The session had also motivated them through quiz activities which were fun learning. The participants shared a lot of positive views as discussed in chapter IV.

## 5.2 Discussion

The main research finding of this study was the increase in the students' vocabulary knowledge after receiving eight weeks of vocabulary treatment. This implies that the BU and TD instructional approaches work effectively in developing and improving Bhutanese secondary school students' English vocabulary knowledge. This research finding confirms the pedagogical principles of (Moskovsky et al., 2015), who claimed that both BU and TD approaches made significant gains in students' attainment of academic vocabulary.

This research finding is in line with the findings of previous research conducted by Lee and Yoon (2019), that there was no statistically significant difference between the BU and TD approaches, although both approaches were effective at improving the students' vocabulary knowledge.

### **BU performed slightly better than TD**

The finding is also in alignment with the result of a different study conducted in a Chinese context (Moskovsky et al., 2015), that despite the high scores of both groups, on the post-test the BU group performed slightly better than the TD group in terms of vocabulary knowledge. This could be possibly due to the fact of sequences of steps or stages involved in the BU instructional approach which moved from lower to higher or in other words from simple to complex stages, which helped them to comprehend easily. Another factor that is relatively likely to have played a role in this study's results is the students' L2 proficiency level. This is because there is a general agreement in the relevant literature that TD processing is more common among high-proficiency students, whereas lower proficiency students tend to opt for BU processing (Eskey, 1988; Shohamy & Inbar, 1991; Tsui & Fullilove, 1998).

Another important finding from the study was the students' positive opinions toward the BU and TD instructional approaches. Being able to learn words explicitly and facilitating students in memorizing new words were some of the main benefits of these two approaches perceived by the participants. These support the claims made by Lee and Yoon (2019) that the two approaches helped students memorize words and store them in their long-term memory.

It was also interesting to learn that these approaches assisted the participants in exploring and learning related words from the lexical family of the target word. Although they knew the target word, the participants were unaware of many words from its lexical family. After learning through such approaches, the students gained the knowledge and ability to group the words into their lexical families. At a larger part,

learning academic vocabulary through these approaches motivated the participants to learn more words thereby expanding their reading and speaking abilities.

However, it was noticeable that some students also raised the point about the process being time-consuming and tiresome. Thus, more concise activities in the lessons are recommended for teachers who would like to bring forward the BU and TD instructional approaches in real classrooms.

### 5.3 CONCLUSION

Bhutanese secondary students participated in the academic vocabulary course using either of the two instructional approaches—BU and TD which lasted for two months with forty-eight sessions of vocabulary instruction to investigate the effectiveness of the two approaches on students' vocabulary learning.

The participants showed a great deal of interest in taking part in the vocabulary learning session. Both the BU and TD instructional approaches brought a great impact on the participants' vocabulary knowledge. It was evident from the results that introducing vocabulary learning approaches like BU and TD in the Bhutanese context yielded huge advantages to the participants. The qualitative data revealed that the attainment of vocabulary knowledge from these approaches supported their reading and speaking abilities at large.

The findings from the study revealed that the use of either of the two approaches helped improve the Bhutanese students' vocabulary knowledge although neither of the instructional approaches appeared to be more effective than the other. There were significant improvements in the achievement of academic vocabulary knowledge of

both groups. This signifies that either of the two instructional approaches adopted in the current study effectively achieved substantial vocabulary learning outcomes.

The qualitative data disclosed that the participants support these vocabulary learning approaches greatly. The report suggests that the BU and TD approaches expanded their vocabulary knowledge at a significant level and also developed a sense of motivation and interest to explore more new academic vocabulary through such approaches.

#### **5.4 Implications**

The research on vocabulary learning on Bhutanese secondary students using BU and TD instructional approach which lasted for two months studied the following implications:

It was studied that the teachers who happen to develop these vocabulary teaching approaches in the class should be aware of the usage of the two instructional approaches with the particular group of students. It was learned and supported by the relevant literature that low achievers tend to opt for BU instructional approach and high achievers choose the TD instructional approach. It is supported by the literature that low achievers choose BU instructional approach as the procedures in this instructional approach move from smaller units to higher units and are easy to comprehend.

#### **5.5 Limitations**

The main problems faced by the researcher while conducting research were presented below:

- 1. Selection criteria of academic words in the research instruments**



The 50 academic words included in the pre-test and the post-post were selected randomly. The researcher has not set any criteria for the selection of these words used in the test. The words should have been selected based on some relevant literature and criteria.

## **2. Lack of lively activities in the lesson**

The other limitation was in the activity part, it seemed that not all the participants enjoyed doing the activities. The main reason learned was the lack of variety means of presenting the activities. The school lacked facilities like internet connection, overhead projectors. According to Jibrin et al. (2017) and Nuraeni et al (2020), mentioned in the results of their study that the internet connection had a positive impact on the students' academic performance, while a lack of mobile and internet connection was the challenge in the Bhutanese context. Had the electronic devices like mobiles for the participants were allowed in the classroom, the activities would have been fun and they must have shown more interest in participating in the activities and learned more.

## **5.6 Recommendations**

According to the limitations of the present study, further research should concern the following:

Future researchers should consider the selection of academic words used in the test based on some relevant literature and criteria to confirm the uniformity of the level of academic words to be tested.

To make the sessions lively, the activity part should be designed with the use of ICT and internet facilities to interest the participants. This can be done through the use

of mobile phones or other gadgets where children can participate in the activities actively. It was unfortunate here in Bhutan that schools do not allow the use of gadgets in the classrooms.



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## Appendices

### Appendix 1

#### Lesson Plan (BU)

Teaching Vocabulary through **Bottom-up instructional approach**

Teacher's Name: Pem Chencho

Level of students: 10<sup>th</sup> grader

(N=37)

Date:

Time: 1hr.

**Aim:** "Introducing and practicing new vocabulary"

**Objective:** By the end of the lesson, the students will be able to:

- pronounce the academic words (target words) correctly
- identify new Academic Vocabulary using bottom-up strategy to classify them correctly,
- use vocabulary that they have learned to do gap-filling exercise accurately, and
- write the meaning of the words using context clues correctly.

*(In this session the participants learn seven academic words (premier, Crabs, devious, remedy, alleged, phrase, regime)*

Stages	Activities	Time	Material	Comments
<p><b>Opening</b></p>	<ul style="list-style-type: none"> <li>• <b>Greeting</b></li> </ul> <p>-Tr greets and chats with Ss.</p> <p>-the class will recapitulate the vocabulary learnt in the session before.</p> <p>-Tr evaluates Ss' answers and makes a summary of last lesson.</p> <ul style="list-style-type: none"> <li>• <b>Transition</b></li> </ul> <p>-Tr will say "Today, you are going to learn new vocabulary through an instructional same approach called 'bottom-up strategy'."</p> <p>Highlight a bit once again on the Bottom-up processing – the stages—from <b>word-formation</b> to <b>definition and related words</b>, to <b>family words</b>, to <b>phrases and</b></p>	10 mins	-board and Marker	<p>-Some Ss may arrive late.</p> <p>-During activity in warm-up some Ss may spell the word incorrectly, and there would be more background noise as the Ss have to move from their seats to the board.</p>

	<b>collocations</b> , to <b>sentences</b> , and finally to <b>context</b> .			
<b>Events I-IV.</b>	<p>- The teacher will carry out the bottom-Up instruction through the following six events in sequence.</p> <p><b>Event 1: Introducing the spoken and written form of the target word</b></p> <p>- Tr. will ask for the differences between spoken and written forms in terms of pronunciation, syllables, and spelling.</p> <p>Eg: <b>regime</b> (target word)</p> <p>Syllables: 2</p> <p>Type: noun</p> <p><b>Event 2: Introducing the definition and L1 translation of the target word</b></p>	10 mins	-board and Marker	<p>Rather than the teacher dominating the class, the teacher will make it students centered by making them guess the same lexical family, L1 translation, pronunciation, syllables, and spelling.</p>

	<p>- <b>Definition of regime:</b> a government, especially an authoritarian one.</p> <p><b>L1 translation:</b> མིང་གཞུང་། མིང་ཚུང་།</p> <p><b>Event 3: Introducing related forms from the same lexical family</b></p> <p>- Tr. will introduce an example of the same lexical family of the target word.</p> <p>Eg: <b>regimes</b> (noun)</p> <p><b>Event 4: Introducing different phrases and collocations of the target word (regime)</b></p> <p>Tr. will talk about a phrase and a collocation of the target word.</p> <p>Eg: establish, install, set up <b>regime</b> (VERB + REGIME)</p>			
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Exercise 1	Practicing stages 1-4	10 mins		
	<p><b>Instruction:</b> In a small group of 4-5 Ss, work on the meaning of the academic words following the bottom-up events 1-4. With a help of the dictionary, you need to come up with the word definition, syllables, L1 translation, type, lexical family, collocations of the following academic word (s):</p> <p><b>alleged</b></p> <p>-Tr sets a time of 2 mins for the task.</p> <p><b>Evaluation:</b> Ss are asked to compare the answers with their neighbors to check whether the accuracy of their guess. Tr helps discuss the answers with the whole class.</p>		<p>- Dictionary</p>	<p>Some Ss may not be able to guess the correct meaning of the word, so to save time, Direct L1 Translation can be replaced.</p>

<b>Event 5</b>	<b>Presenting the target word at the sentence level</b>	5 mins		
	<p>- Tr. will then present the target word into a sentence and discuss how the word fits into a sentence and the meaning.</p> <p>His <b>devious</b> nature was shown in half-lies and small dishonesties.</p>		Charts, board, and marker	
<b>Exercise 2</b>	<b>Gap Filling</b>	10 mins		
	<p><b>Instruction:</b> This is individual work. You are required to use the words from the box to fill in the gap of each sentence.</p> <p><b>Exercise Adapted from Vocabulary Exercises for the academic word list.</b></p> <p><b>Exercise 2</b></p>		Worksheet	As a part of monitoring, tr will move around and give clues to the struggling ones if any.

	<p>(phrase, teacher, emerged, investigation, candid, remedy)</p> <p>1. I'm taking steps to _____ those issues.</p> <p>2. A _____ is a group of words that express a concept and is used as a unit within a sentence.</p> <p><a href="https://forms.gle/CA DFPj9JZKNjY4Wz9">https://forms.gle/CA DFPj9JZKNjY4Wz9</a></p> <p><b>Evaluation:</b> The class will take a quick quiz through the above link and have discussion as a whole class.</p>			
<b>Event 6</b>	<b>Presenting the target word at the level of the whole context</b>	8 mins		
	Finally, Tr. will have the target word in the whole context level. The teacher		-board and Marker	



	<p>will familiarize students with the following steps by <b>Catherine Demetros</b> to guess and learn the meaning at a context level.</p> <p><input type="checkbox"/> <b>Step 1: Reread and read ahead</b></p> <p>Stop and reread the words that come before and after the unfamiliar word.</p> <p><input type="checkbox"/> <b>Step 2: Identify context clues</b></p> <p>Think about the meaning of the words in the text that surround the unfamiliar word.</p> <p><input type="checkbox"/> <b>Step 3: Decide on a meaning</b></p> <p>Use what you know from the context to make an educated</p>		Screen/Charts	
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	<p>guess about the meaning of the unfamiliar word.</p> <p>□ <b>Step 4: Check that meaning in the context</b></p> <p><b>(Context Clues: 5 Fun Activities to Boost Vocabulary Development by Catherine Demetros)</b></p>			
<b>Exercise 3</b>	<b>Partner Practice</b>	10 mins		
	<p><b>Instruction:</b> In pairs, read the following informational texts together and find the meaning of words applying the four steps of using context.</p> <p>The following exercise is adapted from online free context clues exercises.</p> <p>1. Our newly elected premier spoke for an hour yesterday. Who is Premier referred to?</p>		Worksheet	<p>-If Tr has monitored the class while Ss are doing this exercise and sees that most Ss get their answers right, there is no need to let them compare the answers so that Tr can</p>

	<p>a. person who works in a law court</p> <p>b. university teacher</p> <p>c. adventurer</p> <p>d. head of the government</p> <p>2. Do you like <b>crabs</b>?</p> <p>a. sea creatures that walk sideways</p> <p>b. very thin small cakes</p> <p>c. tight, hard collars</p> <p>d. large black insects that sing at night.</p> <p><a href="https://forms.gle/hBE22haFPZ">https://forms.gle/hBE22haFPZ</a></p> <p><a href="#">Xc9Jo56</a></p> <p><b>Evaluation:</b> The class will sit over a quick quiz and the teacher will involve in a whole-class discussion for</p>			<p>save more time.</p>
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	the correctness of the answers.			
<b>Closing</b>	<p>-Tr praises all the Ss for working very hard.</p> <p>-Tr asks a few Ss to summary what they have learned.</p> <p>Eg: What academic words did we learn today?</p> <p>-Tr makes quick revisions and ends the class.</p>	2 mins		

**Note:** Tr= Teacher; Ss = Students; mins = minutes; Eg = Example

## Appendix 2

### Lesson Plan (TD)

Teaching Vocabulary through **Top-Down instructional approach**

Teacher's Name: Pem Chencho

Level of students: 10<sup>th</sup> grader (N=33)

Date:

Time: 1hr.

**Aim:** “Introducing and practicing new vocabulary”

**Objective:** By the end of the lesson, the students will be able to:

- pronounce the academic words (target words) correctly
- identify new Academic Vocabulary using top-down strategy to classify them correctly,
- use vocabulary that they have learned to do gap-filling exercise accurately, and
- write the meaning of the words using context clues correctly.

(The participants learn seven academic words in a session (**premier, Crabs, devious, remedy, alleged, phrase, regime**))

**Note:** Tr= Teacher; Ss = Students; mins = minutes; Ex = Example

*168 academic words chosen from the academic word list correspond to the words of their grade's literature.*

Stages	Activities	Time	Material	Comments
<p><b>I. Opening</b></p>	<p><b>Greeting</b></p> <ul style="list-style-type: none"> <li>-Tr greets and chats with Ss.</li> <li>-Tr gets to a few Ss to share how they learn vocabulary.</li> <li>-Tr evaluates Ss' answers and makes a summary of how Ss learn vocabulary.</li> </ul> <p><b>Transition</b></p> <ul style="list-style-type: none"> <li>-Tr will say "Today, you are going to learn new vocabulary through an instructional approach called 'Top-Down strategy'."</li> </ul> <p><b>Introduction to the strategy</b></p> <p>The Tr. will introduce the '<b>Top-Down</b>' strategy.</p> <p>The definition and how it's carried out.</p> <p><b>Top-down (Definition)</b></p>	<p>10 mins</p>	<ul style="list-style-type: none"> <li>- Whiteboard</li> <li>-Marker</li> <li>PowerPoint Presentation</li> </ul>	<ul style="list-style-type: none"> <li>-Some Ss may arrive late.</li> <li>-During activity in warm-up some Ss may spell the word incorrectly, and there would be more background noise as the Ss have to move from their seats to the board.</li> </ul>

	<p>The Top-Down processing approach in vocabulary learning, the process will be based on the stages from learning words from context to sentences, phrases, and collocations, to family words, to the definition and related words then finally to word-formation.</p> <p>- Tr will carry out the Top-Down instruction through the following six events in sequence</p>			
<b>Events VI</b>	<b>Presenting the target word at the level of the whole context</b>	8 mins		
	<p>Firstly, Tr. will have the target word in the whole context level. Students will be familiarized with the following steps by <b>Catherine Demetros</b> to guess and learn the meaning at a context level.</p> <p><input type="checkbox"/> <b>Step 1: Reread and read ahead</b></p> <p>Stop and reread the words that come before and after the unfamiliar word.</p> <p><input type="checkbox"/> <b>Step 2: Identify context clues</b></p> <p>Think about the meaning of the words</p>		-board and Marker  - PPP/Charts	

	<p>in the text that surround the unfamiliar word.</p> <p><input type="checkbox"/> <b>Step 3: Decide on a meaning</b></p> <p>Use what you know from the context to make an educated guess about the meaning of the unfamiliar word.</p> <p><input type="checkbox"/> <b>Step 4: Check that meaning in the context</b></p> <p><b>(Context Clues: 5 Fun Activities to Boost Vocabulary Development by Catherine Demetros)</b></p>			
<b>Exercise I</b>	<b>Partner Practice</b>	10 mins		
	<p><b>Instruction:</b> In pairs, read the following informational texts together and find the meaning of words applying the four steps of using context.</p> <p>The following exercise is adapted from online free context clues exercises.</p>		Worksheet	<p>-If Tr has monitored the class while Ss are doing this exercise and sees that most Ss get their answers right, there is no</p>



	<p>1. Our newly elected premier spoke for an hour yesterday. Who is Premier referred to?</p> <ul style="list-style-type: none"> <li>e. person who works in a law court</li> <li>f. university teacher</li> <li>g. adventurer</li> <li>h. head of the government</li> </ul> <p>2. Do you like <b>crabs</b>?</p> <ul style="list-style-type: none"> <li>a. sea creatures that walk sideways</li> <li>b. very thin small cakes</li> <li>c. tight, hard collars</li> <li>d. large black insects that sing at night</li> </ul> <p><a href="https://forms.gle/hBE22haFPZXc9Jo56">https://forms.gle/hBE22haFPZXc9Jo56</a></p> <p><b>Evaluation:</b> The class will sit over a quick quiz through the above link and the teacher will involve in a whole-class discussion for the correctness of the answers.</p>			<p>need to let them compare the answers so that Tr can save more time.</p>
<p><b>Event V</b></p>	<p><b>Presenting the target word at the sentence level</b></p>	<p>5 mins</p>		

	<p>Tr. will then present the target word into a sentence and discuss how the word fits into a sentence and the meaning of the targeted word.</p> <p>His <u>devious</u> nature was shown in half-lies and small dishonesties.</p>			
<b>Exercise 2</b>	<b>Gap Filling</b>	10 mins		
	<p><b>Instruction:</b> This is individual work. You are required to use the words from the box to fill in the gap of each sentence.</p> <p>Exercise Adapted from Vocabulary Exercises for the academic word list.</p> <p>(phrase, teacher, emerged, investigation, candid, remedy)</p> <p>3. I'm taking steps to _____ those issues.</p> <p>4. A _____ is a group of words that express a concept and is used as a unit within a sentence.</p>		Worksheet	As a part of monitoring, tr will move around and give clues to the struggling ones if any.

	<p><a href="https://forms.gle/CADFPj9JZKNjY4Wz9">https://forms.gle/CADFPj9JZKNjY4Wz9</a></p> <p><b>Evaluation:</b> Ss will be taking the short quiz through above link and whole class discussion will take place.</p>			
<p><b>Events IV-III</b></p>	<p><b>Event 4: Introducing different phrases and collocations of the target word (regime)</b></p> <p>Tr. will talk about a phrase and a collocation of the target word.</p> <p>Eg: establish, install, set up <b>regime</b> (VERB + REGIME)</p> <p><b>Event 3: Introducing related forms from the same lexical family</b></p> <p>-Tr. will introduce an example of the same lexical family of the target word.</p> <p>Eg: <b>regimes</b> (noun)</p>	<p>10 mins</p>	<p>-board and Marker</p>	<p>Rather than the teacher dominating the class the teacher will make it students centered by making them guess the same lexical family, L1 translation, pronunciation, syllables, and spelling</p>

	<p><b>Event 2: Introducing the definition and LI translation of the target word</b></p> <p>- <b>Definition of</b> regime: a government, especially an authoritarian one.</p> <p><b>L1 translation:</b> རྒྱལ་ཁབ། རྒྱལ་རྒྱུང་།</p> <p><b>Event 1: Introducing the spoken and written form of the target word</b></p> <p>- Tr. will ask for the differences between spoken and written forms in terms of pronunciation, syllables, and spelling.</p> <p>Eg: <b>regime</b> (target word)</p> <p>Syllables: 2</p> <p>Type: noun</p>			
<p><b>Exercise III</b></p>	<p><b>Practicing stages 1-4</b></p>	<p>10 mins</p>		
	<p><b>Instruction:</b> In a small group of 4-5 Ss, work on the meaning of the academic words following the bottom-up events 1-4. With a help of the dictionary, you need to come up with the word</p>		<p>Dictionary</p>	<p>Some Ss may not be able to guess the correct meaning of</p>

	<p>definition, syllables, L1 translation, type, lexical family, collocations of <b>alleged</b></p> <p><b>Evaluation:</b> Ss are asked to compare the answers with their neighbors to check whether the accuracy of their guess. Tr helps discuss the answers with the whole class.</p>			<p>the word, so to save time, Direct Translation can be replaced.</p>
<p><b>V. Closing</b></p>	<p>-Tr. praises all the Ss for working very hard.</p> <p>-Tr. asks a few Ss to summary what they have learned.</p> <p>Eg: What academic words did you learn today?</p> <p>-Tr. gives a quick review of the lesson and ends the class.</p>	<p>2 mins</p>		

### **Appendix 3**

#### **Interview questions**

A total number of 8 voluntary participants were invited to join the interview. The following open-ended questions were asked to the participants:

1. How did you find about the bottom-up/top-down instructional approaches for vocabulary learning? Why?
2. Have you used such an instructional approach for learning vocabulary before? How is it different?
3. Did you find the instructional approach effective for vocabulary learning? How?
4. What are the advantages of the bottom-up/top-down approaches you experienced during the course?
5. What are the disadvantages of the bottom-up/top-down approaches you experienced during the course?
6. On a scale of 1-10 (1 being the lowest and 10 being the highest), how do you rate the effectiveness of the BU/TD instructional approach?
7. What are your feedbacks or comments on this vocabulary learning approach?

## Appendix 4

### Tentative timetable

The table below shows the timetable for the two different instructional approaches during the eight weeks of the treatment course.

<b>Instructional Approach</b>	<b>Activity</b>	<b>Days</b>	<b>Time</b>
	Pretest	Day 1	17.00hrs - 18.00.00hrs
Bottom-up	1 <sup>st</sup> Session	Day 2	17.00hrs - 18.00.00hrs
Top-down	2 <sup>nd</sup> Session	Day 3	17.00hrs - 18.00.00hrs
Bottom-up	3 <sup>rd</sup> Session	Day 4	17.00hrs - 18.00.00hrs
Top-down	4 <sup>th</sup> Session	Day 5	17.00hrs - 18.00.00hrs
Bottom-up	5 <sup>th</sup> Session	Day 6	17.00hrs - 18.00.00hrs
...	...	...	...

Top-down	48 <sup>th</sup> Session	Day 48	17.00hrs - 18.00.00hrs
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## Appendix 5

### Targeted Academic Words

The following 168 academic words were selected based on words' frequency, usefulness, and difficulty (Laufer & Nation, 2012). These words correspond to the level of their literature.

bashing	patience	ubiquitous	rash	protagonist	cardinal
ingress	pub	thwarts	Research	Economic	Contract
Analysis	Factor	Legal	Period	Available	attenuate
Similar	Indicate	drawer	esteemed	incentive	suffrage
controversy	cotton gin	Daunting	Static	original	Compact
frozen	encountered	reverts	diverted	selfless	researcher
labors	society	intrude	foremost	plausible	curtail
clandestine	Inhibit	transient	dispute	disperse	distinct
expedite	extensive	priceless	fabrication	authentic	Decade
implement	latter	devise	optimistic	sagacity	assure
introvert	trivial	candid	Resolve	deficit	manipulate



trepidation	materialized	tummy lofty	Pro	emend	typos
scrubbing	strap	paved	dashed	Roving	lonesome
perspective	compound	apology	behavior	volunteer	celebration
counsel	phrase	wealth	agriculture	Regime	specify
asset	heritage	poverty	audience	intelligence	consent
exhibit	strive	capture	debate	proceed	absorb
exceed	persist	frequent	approximate	prior	consistent
former	mutual	insolvent	roving	remiss	rescind
conviction	restored	replica	ardent	penurious	knack
instigate	dashed	hastily	flaws	chronic	insinuate
conspicuous	vast	fortify	heinous	indifferent	lucrative
infrequently	skew	legitimate	porous	terrestrial	jug
emend	recuse	linchpin	strain		

## VITA

<b>NAME</b>	Pem Chencho
<b>DATE OF BIRTH</b>	05 November 1980
<b>PLACE OF BIRTH</b>	Paro, Bhutan
<b>INSTITUTIONS ATTENDED</b>	Paro College of Education, Bhutan Chulalongkorn University, Thailand
<b>HOME ADDRESS</b>	Metsi, Tsento Paro, Bhutan



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY