



Thai Learners' Awareness of Selectiveness Constraint on

English Complex-word Derivation¹การตระหนักรู้เรื่องข้อบังคับการเลือกใช้ชนิดของคำในการสร้างคำผสม
ภาษาอังกฤษของผู้เรียนชาวไทยRachen Phoaim² and Saovapak Kallayanamit³ราเชน โพธิ์อิม⁴ และ เสาวภาคย์ กัลยาณมิตร⁵

(Received: 5 January 2021; Revised: 23 March 2022; Accepted: 20 May 2022)

Abstract

This research examined 59 Thai learners' awareness levels of the selectiveness constraint on English complex-word derivation and investigated correlation between these awareness levels and the English proficiency levels. The instrument was a 60-question, 4-multiple-choice test with 10 non-polysemous and 10 pairs of polysemous derivational affix targets. The English-course GPA's and the standardized CEPT scores represented the participants' English proficiency. It was found that the participants had a fair level of the awareness with greater success on the non-polysemous affixation, and its correlation with the English proficiency was positive. The CEFR levels of vocabulary were claimed a possible factor of success or failure of the selectiveness constraint acquisition.

Keywords: Morphological awareness, Selectiveness of derivation constraint, Complex words

บทคัดย่อ

งานวิจัยนี้ศึกษาาระดับการตระหนักรู้เรื่องข้อบังคับการเลือกใช้ชนิดของคำในการสร้างคำผสมภาษาอังกฤษของผู้เรียนชาวไทย 59 คน และความสัมพันธ์ระหว่างระดับการตระหนักรู้กับระดับความรู้ความสามารถโดยทั่วไปด้านภาษาอังกฤษ เครื่องมือคือแบบทดสอบปรนัย 4 ตัวเลือก จำนวน 60 ข้อ มีอุปสรรคและปัจจัยชนิดไม่กำกวม 10 ตัว และชนิดที่ให้ความหมายหลายนัย 10 คู่ เกรดเฉลี่ยวิชาภาษาอังกฤษและคะแนนสอบมาตรฐาน CEPT

¹ This article is a revised version of an undergraduate thesis entitled "Thai Learners' Awareness of Selectiveness of Derivation Constraint on English Complex Words" in Bachelor of Arts Program in English, Faculty of Humanities, Naresuan University

² B.A. Student, Bachelor of Arts Program in English, Faculty of Humanities, Naresuan University

³ Assistant Professor Dr., Department of English, Faculty of Humanities, Naresuan University

⁴ นิสิตหลักสูตรศิลปศาสตรบัณฑิต สาขาวิชาภาษาอังกฤษ คณะมนุษยศาสตร์ มหาวิทยาลัยนเรศวร

⁵ ผู้ช่วยศาสตราจารย์ ดร. ภาควิชาภาษาอังกฤษ คณะมนุษยศาสตร์ มหาวิทยาลัยนเรศวร

ใช้เป็นคำระดับความรู้ทั่วไปด้านภาษาอังกฤษ พบว่ากลุ่มตัวอย่างตระหนักรู้เรื่องดังกล่าวในระดับพอใช้ และประสบผลสำเร็จมากกว่าในการสร้างคำด้วยตัวอุปสรรคและปัจจัยชนิดไม่ก้ำกวม และพบความสัมพันธ์ที่สอดคล้องตามกันกับระดับความรู้ด้านภาษาอังกฤษ โดยระดับค่า CEFR ของคำศัพท์มีผลต่อความสำเร็จหรือล้มเหลวในการเรียนรู้ข้อบังคับการเลือกใช้ชนิดของคำในการสร้างคำผาน

คำสำคัญ: การตระหนักรู้เรื่องโครงสร้างคำ ข้อบังคับการเลือกใช้ชนิดของคำในการสร้างคำ คำผาน

Introduction

Rationale

Words are an independent, meaningful, and smallest unit of an utterance (Lardiere, 2006), which can be equivalent to a free morpheme (as in “cat”), larger than a morpheme (as in “cats”), but smaller than a phrase (as in “That cute cat”). Words are divided into four types: (1) simple, (2) compound, (3) complex, and (4) compound-complex words. (Kallayanamit, 2019; Lardiere, 2006). Complex words are constructed from two or more than two morphemes, and at least one of the morphemes must be bound (i.e., a dependent, meaningful, and smallest unit of a word) such as “-s, -ed, -ive, -ate, de-, -ion, -vis-” in “**acts**, **acted**, **active**, **activate**, **deactivate**, **vision**” (Balpho, 2000; Kallayanamit, 2019). The English and Thai lexicons contain complex words. The following exemplifies the complex words in Thai: “**อนุ**ชน (minor + people = young people), **พิธี**กร (ceremony + doer = master of ceremony), **พิธี**กรรม (ceremony + act = an act of ceremony), **ความ**รัก (noun-forming prefix, meaning “state” + love = state of love), **การ**ทำงาน (noun-forming prefix, meaning “act” + work = an act of working), with the morphemes in bold being bound (Iwasaki and Ingkaphirom, 2005). The morphological process of “acts (present tense verb), acted (past tense verb or past participle)” is called “inflection,” in which suffixes are added to the stem or the root to convey grammatical meanings such as tense and aspect, and the part of speech of the stem or the root is not changed. Meanwhile, the morphological process of “active (adjective), activate (verb), activation (noun), deactivate (verb)” is called “derivation,” in which affixes are added to the base or the root to express a certain meaning, and the part of speech of the base or the root is changed. In this research, the derivation of complex words is the center of interest.

Despite the existence of complex words in both languages, some differences are observed. Following Iwasaki and Ingkaphirom (2005), Kallayanamit (2019), and Lardiere (2006), English derivation is much more productive than that in Thai, so English has a relatively longer list of derivational affixes and, accordingly, a larger number of complex words. Moreover, in English,



more than one derivational affixes can be added to the same root to form a complex word such as “deactivation (de-act-ive-ate-ion);” on the other hand, in Thai, a complex word comprises only a root and an affix such as “อมนุษย์ (not + human = non-human),” อนุภริยา (minor + wife = mistress),” สัทศาสตร์ (speech sound + study = a study of speech sounds), นักเรียน (skilled person + study = student), การเดิน (noun-forming prefix + walk = an act of walking).” Finally, the derivational process in English is governed by “selectiveness constraint,” which requires that an affix select a particular part of speech of the root or the base to be attached to to derive the targeted word class and meaning. For example, the suffix “-ion” chooses a verb to be added to to form a noun, meaning “an act of” as in “deactivate + -ion, relate + -ion, celebrate + -ion.” Unlike English, the “selectiveness constraint” is not applicable in Thai (Kallayanamit, 2019), probably due to the fact that each affix in Thai carries a unique meaning with it, and its attachment seems to aim at creating a new word with a new non-grammatical meaning rather than at constructing a new part of speech. For instance, the following affixes have special intrinsic meanings: “อ- (not), อนุ- (minor), นัก- (skilled doer), ช่าง- (skilled doer), มหา- (great), ไพร- (far), -กร (doer), -กรรม (act), -ศาสตร์ (study),” so each of them can be attached to any root (e.g., อมนุษย์, อธรรม, อคติ, พิธีกรรม, กายกรรม, มโนกรรม) as long as the targeted meaning is in need from the affixes. This current study focuses on the issue of the selectiveness constraint.

The different use of “selectiveness constraint” in English and Thai gave rise to concern in regard to second/foreign-language (L2) acquisition of the constraint. To be more specific, a question was posed as to whether, if any, to what extent Thai learners could manage to acquire the selectiveness constraint of English. This question was grounded in the theory of language transfer. Following Ellis (1994), the development of L2 could be affected by learner-internal factors; e.g., language transfer and by learner-external factors; e.g., length of L2 exposure, length of residence, age, frequency of input, etc. In case of “learner-internal factors,” as cited in Kallayanamit (2019), Ellis (2002), Gass and Selinker (1994), and Saville-Troike (2004) defined “language transfer” as the carrying-over of some linguistic features or systems from one language to another. The similar aspects of the two languages were claimed to facilitate the learning of the target language (TL); whereas, the different parts were found to interfere in the TL acquisition, manifesting their impacts in the non-native-like production and comprehension. Therefore, based on the theory of language

transfer as mentioned, the acquisition of the English derivation, more specifically, the selectiveness constraint, might be difficult for Thai learners.

Several researches were carried out on the topic of English-as-a-Foreign-Language (EFL) morphological awareness such as Deng et al. (2016); Kallayanamit (2019); Karlsson (2015); Masrai (2016); Pasquarella et al. (2013); Ward and Chuenjundaeng (2009); Zhang (2013), and Zhang et al. (2014). Their findings can be generalized into the following four issues about EFL morphological awareness: (1) L1 transfer, (2) morphemic irregularity and polysemy, (3) relation between morphological awareness and language skills, and (4) relation between morphemic structure awareness and morphemic meaning awareness. In case of L1 transfer, the limited use of affixation in L1 slowed down or posed challenges to the acquisition of EFL derivational processes as in the cases of Chinese-English in Deng et al. (2016) and Thai-English in Ward and Chuenjundaeng (2009) and Kallayanamit (2019). Failure to decompose words into morphemes or to relate the base to its derived form was frequent among low-proficient or beginning-level learners. On the other hand, the productive use of compounding in L1 helped facilitate the Chinese learners to acquire English compounds (Pasquarella, et al., 2013; Zhang, 2013; Zhang, et al, 2014). Likewise, native Swedish speakers were found to manage the complexity of English affixation quite well due to their shared language family (Karlsson, 2015). These findings supported the claim of L1 transfer in L2 morphological development.

With respect to morphemic irregularity, Masrai (2016) found that regular and irregular morphemes (e.g., regular versus irregular plurality as in (many) cars, (two) theses, (five) syllabi) accounted for different degrees of morphological success among Arab learners of English. In case of morphemic polysemy, Kallayanamit (2019) found that affixes with double meanings were the main area of confusion for Thai learners in identifying the meanings (both grammatical and intrinsic ones) of the affixes such as the bold parts of “**spoonfuls** (noun), **unlocks**, (remove), **importable** (into), **indebted** (into), **friendlier** (adjective), **discolored** (reverse),” as opposed to “**beautiful** (adjective), **unkind** (not), **impatient** (not), **incorrect** (not), **quickly** (adverb), **dishonest** (not).” Moreover, Kallayanamit (2019) also found that the Thai learners tended to apply the selectiveness constraint inaccurately when the affixes with double meanings were involved. For instance, they failed to attach the noun-forming suffix “-al” (as in “approval”) to a verb but tended to attach it to a noun instead (as in “natural”). Despite being the English-majored students having been taught some



background on English Morphology, the Thai learners found the polysemy of derivational affixes a challenge hard to overcome.

As for the issue about the relation between morphological awareness and language skills, Kallayanamit (2019), Pasquarella et al. (2013), Zhang (2013), Zhang et al. (2014) found a positive relation between the two aspects. That is, the EFL learners with a higher level of morphological awareness performed better in vocabulary and reading comprehension tasks. Finally, Kallayanamit (2019) found no relation between awareness of morphemic structure and that of morphemic meaning among the Thai learners. This meant that knowing how to decompose words into morphemes did not necessarily entail knowing the meanings of the component morphemes, and vice versa.

Statement of Problems

Among the researches on EFL morphological acquisition as mentioned, only Kallayanamit (2019) and Ward and Chuenjundaeng (2009) examined Thai learners' English affixation awareness. Kallayanamit (2019) attempted to fill the gaps found in Ward and Chuenjundaeng (2009); nevertheless, three issues called for further revision and investigation. First, the instrument (i.e., a four-multiple-choice selectiveness constraint test) could be further revised by creating a balance of polysemous and non-polysemous affix targets and by specifying the parts of speech of the bases in the multiple choices (see Instrument). This refinement was expected to provide either substantial reconfirmation or refutation to Kallayanamit (2019).

Secondly, Kallayanamit (2019) found that the Thai participants chose one meaning of the "polysemous" affix over its counterpart such as "-al" as an adjective-forming suffix as in "natural" (83.02% correct) versus "-al" as a noun-forming suffix as in "approval" (41.51% correct), "-en" as an adjective-forming suffix as in "golden" (81.13% correct) versus "-en" as a verb-forming suffix as in "darken" (62.26% correct), and "-ly" as an adverb-forming suffix as in "commonly" (69.81% correct) versus and "-ly" as an adjective-forming suffix as in "sisterly" (22.64% correct). A question remained to be explored as to a possible factor of the discrepancy in using the selectiveness constraint among the English derivational polysemous affixes. Hence, in the current study, an attempt was made to observe a possible impact of the Common European Framework of Reference for Languages (CEFR) scale of the English vocabulary on the application of the selectiveness

constraint. As known, the CEFR is a six-point scale international standard used to describe the language ability of the learners; namely, A1, A2, B1, B2, C1, and C2 (Cambridge University Press, n.d.). The vocabulary labeled with a higher point (e.g., C1) tend to pose more challenges to the language learners to acquire than the ones labeled with lower points on the CEFR scale (e.g., B2, B1, A2, A1). Therefore, this study would examine if this tendency was evident among the Thai learners.

Finally, neither of the two past works examined the correlation between the Thai learners' English proficiency levels and the levels of success in an application of the selectiveness constraint in English affixation. Thus, this present research made an attempt to find the nature of the correlation between the two aspects. In brief, the three gaps found in the previous studies served as the motivations for this research.

Objectives of the Study

Based on the gaps stated above, two research objectives were set as follows:

1. To examine the second-year, English-majored students' awareness levels of the selectiveness constraint on English complex-word derivation.
2. To investigate a correlation between the awareness levels as stated in (1) and the levels of English proficiency of the Thai learners.

Research Questions

Based on the two objectives, two research questions were posed as follows:

1. To what extent were the second-year, English-majored students aware of the selectiveness constraints on English complex-word derivation in the following cases?
 - 1.1 polysemous affixes
 - 1.2 non-polysemous affixes
2. Was there a correlation between the awareness levels as stated in (1) and the levels of English proficiency of the Thai learners, represented by the grade point averages (GPA's) of the previously-taken English courses and by the standardized Cambridge English Placement Test (CEPT) scores?

Scope of the Study

This research focused only on the awareness of the “selectiveness constraint” on the derivation of English complex words. In addition, the target participants were English-majored undergraduate students who had not taken any English Morphology classes so as to compare the results with those of Kallayanamit (2019), which examined the morphological awareness of those who had taken the English Morphology course prior to the time of the data collection.

Significance

The findings were expected to provide useful information for teachers of English Morphology courses, especially that in regard to the design of course materials, and for learners who were interested in conducting research on English morphological acquisition.

Research Methods

Participants

The participants consisted of fifty-nine second-year, English-majored Thai students registered in semester 1/2020 at Faculty of Humanities, Naresuan University. They had studied the English language through classroom learning in Thailand for more than 10 years. All of them had taken seven English courses in their first year at this university, but none of them had studied the English Morphology course before. As mentioned, they were purposively selected because their performance would be observed in comparison to that of Kallayanamit (2019)’s second-year, English-majored Thai students, who had morphological background from the English Morphology course offered by the curriculum. All the participants entered this project by volunteering consent.

Instrument

The instrument is a sixty-question test designed by the main researcher under the supervision of his thesis advisor. Each of the sixty questions had four multiple choices, containing a base with its part of speech specified as shown below. The directions of the test were to add the given affix to the correct base in the choices.

Question: -fy “verb-forming suffix” = suffix สร้างคำกริยา

a. simplify = simple (noun) + ify

b. simplify = simple (verb) + ify

✓ c. simplify = simple (adjective) + ify

d. simplify = simple (adverb) + ify

There were sixty complex words in the test, and these words carried ten non-polysemous affixes and ten pairs of polysemous affixes (See Table 1). As mentioned, “polysemous” means “more than one meaning,” and “non-polysemous” means “expressing only one meaning.” “Meaning” in this study refers to both grammatical and intrinsic meanings. For example, the derivational suffix “-ly” is polysemous because it can form an adjective, meaning “happening every specified period of time” and “characteristic of” and can form an adverb, meaning “in the manner of”.

All the sixty complex words were taken from the commercial coursebook “American Jetstream,” which the participants had learned in their two English general-education courses. Therefore, although the participants had never taken the English Morphology course before, they were exposed to all the stimuli from their first year. Moreover, the Common European Framework of Reference (CEFR) label of each target word was checked from Online Cambridge Dictionary. Nevertheless, some of the words still lacked information about their CEFR levels and they would be noted as “unspecified” cases as shown in Table 1.

The test was examined for its validity by three experts, who were professors of the Department of English, Faculty of Humanities, Naresuan University. The IOC value of the test was 1.00, and the reliability value was 0.883. The responses to this test would provide answer to the two research questions.

Table 1 Stimuli for Selectiveness Constraint Test

No.	Affixes	Derivation of Parts of Speech and Meanings	Target Words and their CEFR Label
Polysemous affixes			
1	un-	Adjective > Adjective = “not”	unusual (A2), untidy (B1)
	un-	Verb > Verb = “in an opposite direction”	undo (B2), unload (C1)
2	in-	Adjective > Adjective = “not”	incorrect (B1), invisible (B2)
	in-	Verb > Verb = “into”	incite (unspecified), impose (C1)
3	dis-	Adjective > Adjective “not”	dishonest (B2), disloyal (C2)
	dis-	Verb > Verb = “in an opposite direction”	disappear (B1), disapprove (B2)
4	de-	Noun > Verb = “removal of something”	defrost (C1), deforest (unspecified)
	de-	Verb > Verb = “in an opposite direction”	decompose (unspecified), deactivate (C2)
5	-al	Noun > Adjective = “of, like, related to”	environmental (B1), agricultural (C1)



No.	Affixes	Derivation of Parts of Speech and Meanings	Target Words and their CEFR Label
	-al	Verb > Noun = "act, process"	arrival (B1), survival (B2)
6	-ful	Noun > Adjective = "full of"	successful (B1), youthful (C1)
	-ful	Noun > Noun = "full of"	cupful (B2), handful (C1)
7	-ly	Adjective > Adverb = "in the manner of"	exactly (A2), nervously (B2)
	-ly	Noun > Adjective = "Happening (every specified period of time), characteristic of"	daily (A2), cowardly (B2)
8	-en	Noun > Adjective = "made of, like"	wooden (A2), golden (A2)
	-en	Adjective > Verb = "cause"	fasten (B1), deepen (C1)
9	-ant	Verb > Noun = "person, thing"	assistant (B1), servant (B2)
	-ant	Verb > Adjective = "doing, showing"	pleasant (A2), ignorant (C2)
10	-y	Noun > Adjective = "full of, characterized by"	healthy (A2), wealthy (B2)
	-y	Adjective > Noun = "condition, quality, action"	honesty (B2), modesty (unspecified)
Non-polysemous affixes			
1	-ize	Adjective > Verb = "cause to become"	specialize (B2), legalize (C1)
2	-ment	Verb > Noun = "state, action"	excitement (B1), establishment (C1)
3	-able	Verb > Adjective = "ability"	reliable (B1), renewable (C1)
4	-ive	Verb > Adjective = "related to, having quality of"	creative (B1), persuasive (C1)
5	-ness	Adjective > Noun = "condition, quality, state"	politeness (B2), awareness (C1)
6	-dom	Noun > Noun = "state of being"	kingdom (B2), stardom (C2)
7	-ous	Noun > Adjective = "full of, characterized by, like"	dangerous (A2), poisonous (B2)
8	-th	Adjective > Noun = "condition, state"	truth (B1), warmth (C1)
9	-less	Noun > Adjective = "without, lacking"	friendless (unspecified), thoughtless (C2)
10	-like	Noun > Adjective = "like, characteristic of"	childlike (unspecified), godlike (unspecified)

As for the second research question, each participant was asked to provide information about the final grades they obtained from the seven English required courses they had taken in their first year at Naresuan University, which consisted of Fundamental English, Developmental

English, English Listening and Speaking, Non-Fiction Reading, English Grammar for Communication, English Reading and Writing, and Greek and Roman Mythology. Their grades were averaged out and used as the representatives of their English Proficiency level. Apart from these GPA's, the standardized Cambridge English Placement Test (CEPT) score, which every participant obtained from taking the test in their first year, was used to represent another part of the English proficiency level. The CEPT test measures the testees' English skills (except for speaking), grammar, and vocabulary. The GPA's and the CEPT scores would be used to find a correlation between the awareness levels of the selectiveness constraint and the levels of the English proficiency, as raised in research question (2).

Data collection

Due to the COVID-19 pandemic, the data collection was administered online via Microsoft Team platform. The test itself was created in a Google Form. About a week prior to the test date, the researcher approached the prospective participants online to explain the purpose of the research project and the nature of the data collection. When the participants agreed to participate in the project, an appointment for the testing proceeded. On the test date, each participant was given two hours to complete the test. During the testing, they were not allowed to search for help from any outside sources, but they could always ask the researcher, who was online the whole period of time, for clarification.

Data analysis

Each of the correct answers from the participants was given one point. The total score across fifty-nine participants was 3,540 points (60 points x 59 participants). For each target affix (which was carried by two target complex words), the total score was 118 points (1affix x 2 words x 59 participants). The frequency and percentage of correct responses were calculated and used to answer the first research question.

As for the correlation between the awareness of the selectiveness constraint and the English proficiency, Pearson Correlation was then applied to the average grades of the English courses, the CEPT scores, and the score from the selectiveness constraints test.



Findings

The findings are presented into two sections, following the two research questions.

1. Findings about extent of awareness of selectiveness constraint on English complex-word derivation

1.1 Overall level of awareness

The participants had a fair level of awareness of the selectiveness constraint on English complex-word derivation (i.e., 56.38% showing accurate attachment). See Table (2) for the details. Note that the evaluation in the last column followed that used at Naresuan University as a suggested grading schema for undergraduate studies.

Table 2 Overall Awareness Level of Selectiveness Constraint on English Complex-Word Derivation

Categories of Derivational Affixes	Frequency and Percentage of Accurate Responses	Evaluation
Non-polysemous affixes (1,180 items)	808 (68.47%)	Fairly good
Polysemous affixes (2,360 items)	1,188 (50.34%)	Poor
Total frequency and percentage (3,540 items)	1,996 (56.38%)	Fair

Table (2) shows that the Thai participants managed to attach the “non-polysemous” derivational affixes to the expected parts of speech of the bases more successfully than when they attached the “polysemous” ones (i.e., 68.47% versus 50.34%). Reminded that the “non-polysemous” affixes refer to those which express only one meaning or form only one part of speech.

1.2 Awareness of “non-polysemous” affix attachment

In case of the “non-polysemous” affixes, the Thai learners had better awareness of the selectiveness constraint on the attachment of some affixes than others. See Table 3 for the frequency and percentage of the correct responses.

Table 3 Frequency and Percentage of Accurate Selection of Parts of Speech for Non-Polysemous Affix Attachment

No.	Affixes	Part of Speech Selected	Part of Speech Derived	Target Words	Frequency, (%) (Total 118 each affix)	Evaluation
1	-like	noun	adjective	childlike, godlike	102 (86.44%)	Excellent
2	-dom	noun	noun	kingdom, stardom	100 (84.75%)	Excellent
3	-th	adjective	noun	truth, warmth	84 (71.19%)	Good
4	-ment	verb	noun	excitement, establishment	81 (68.64%)	Fairly good
5	-ive	verb	adjective	creative, persuasive	80 (67.80%)	Fairly good
6	-able	verb	adjective	reliable, renewable	78 (66.10%)	Fairly good
7	-ize	adjective	verb	specialize, legalize	77 (65.25%)	Fairly good
8	-ous	noun	adjective	dangerous, poisonous	74 (62.71%)	Fair
9	-less	noun	adjective	friendless, thoughtless	71 (60.17%)	Fair
10	-ness	adjective	noun	politeness, awareness	61 (51.69%)	Poor

Table (3) shows that the awareness levels of the selectiveness constraint on the “non-polysemous” affixes varied from the “excellent” level to the “poor” one. The learners could successfully attach the adjective-forming suffix “like-” and the noun-forming suffix “dom-” to the accurate parts of speech of the bases. On the other hand, they performed poorly in the case of the noun-forming suffix “-ness.”

1.3 Awareness of “polysemous” affix attachment

Like the case of the “non-polysemous” affixes, the attachment of the “polysemous” affixes was successful in some cases but failed in others. Reminded that the “polysemous” affixes refer to those which convey more than one meaning or derive more than one part of speech. See details in Table (4).

Table 4 Frequency and Percentage of Accurate Selection of Parts of Speech for Polysemous Affix Attachment

No.	Affixes	Part of Speech Selected	Part of Speech Derived	Target Words	Frequency, (%) (Total 118 each affix)	Evaluation
1	-y	noun	adjective	healthy, wealthy	89 (75.42%)	Very good
	-y	adjective	noun	honesty, modesty	65 (55.08%)	Fair
2	-al	verb	noun	arrival, survival	78 (66.10%)	Fairly good
	-al	noun	adjective	environmental, agricultural	75 (63.56%)	Fair
3	in-	adjective	adjective “not”	incorrect, invisible	78 (66.10%)	Fairly good
	in-	verb	verb “into”	incite, impose	56 (47.46%)	Very poor
4	dis-	verb	verb “in an opposite direction”	disappear, disapproval	68 (57.63%)	Fair
	dis-	adjective	adjective “not”	dishonest, disloyal	36 (30.51%)	Failed
5	-ly	adjective	adverb	exactly, nervously	65 (55.08%)	Fair
	-ly	noun	adjective	daily, cowardly	56 (47.46%)	Very poor
6	-en	noun	adjective	wooden, golden	65 (55.08%)	Fair
	-en	adjective	verb	fasten, deepen	62 (52.54%)	Poor

No.	Affixes	Part of Speech Selected	Part of Speech Derived	Target Words	Frequency, (%) (Total 118 each affix)	Evaluation
7	de-	verb	verb “in an opposite direction”	decompose, deactivate	63 (53.39%)	Poor
	de-	noun	verb “removal of something”	defrost, deforest	28 (23.73%)	Failed
8	-ant	verb	noun	assistant, servant	63 (53.39%)	Poor
	-ant	verb	adjective	pleasant, ignorant	61 (51.69%)	Poor
9	-ful	noun	adjective	successful, youthful	60 (50.85%)	Poor
	-ful	noun	noun	cupful, handful	37 (31.36%)	Failed
10	un-	Adj	adjective “not”	unusual, untidy	50 (42.37%)	Failed
	un-	verb	verb “in an opposite direction”	undo, unload	33 (27.97%)	Failed

Table (4) shows that the Thai participants performed “very well” in the attachment of the adjective-forming suffix “-ly” (i.e., healthy, wealthy) to the accurate part of speech, but “failed” in several cases as in the prefixes “dis-”, meaning “not” (i.e., dishonest, disloyal), “de-”, meaning “removal” (i.e., defrost, deforest), “un-”, meaning “not and in an opposite direction” (i.e., unusual, untidy, undo, unload) and the noun-forming suffix “-ful” (i.e., cupful, handful).

In addition, for each pair of the “polysemous” affixes, the selection of the part of speech for one affix was more successful (or less failed) than that of its counterpart. For instance, the selectiveness constraint on the attachment of the adjective-forming suffix “-y” in “healthy, wealthy” was “very well” respected (75.42%), but that of the noun-forming counterpart “-y” in “honesty, modesty” was “fairly” performed (55.08%). See further for the different levels of success in applying the selectiveness constraint in the last two columns in Table (4).



2. Correlation between selectiveness constraint awareness and English proficiency

As mentioned, the participants' English proficiency was examined via the grade point averages (GPA's) which the participants obtained from the seven English required courses taken in the previous year and via the standardized placement test (i.e., Cambridge English Placement Test or CEPT) also taken in the year prior to the data collection time. See the correlation between the GPA's and the awareness levels in Table (5) below.

Table 5 Correlation between Selectiveness Constraint Awareness and Grade Point Averages (GPA's) of English Courses

	Mean	SD	N
Score (Selectiveness Constraint Test)	33.83	9.98	59
GPA's	3.35	.41	59

	Score	GPA's
Score Pearson Correlation	1	.552
Sig. (2-tailed)		.000
N	59	59
GPA Pearson Correlation	.552**	1
Sig. (2-tailed)	.000	
N	59	59

Table 5 reveals that there was a positive correlation between the awareness level of the selectiveness of derivation constraint at the p. value 0.000 and the r value 0.552. This means that the Thai learners with higher grade point averages of the English courses previously taken could manage to select the correct parts of speech of the bases for the affix attachment to form English complex words *significantly* more successfully than those with lower GPA's. See Table 6 for the correlation between the CEPT scores and the awareness levels.

Table 6 Correlation between Selectiveness Constraint Awareness and CEPT Scores

	Mean	SD	N
Score (Selectiveness Constraint Test)	33.83	9.98	59
CEPT	25.85	5.70	59

	Score	CEPT
Score Pearson Correlation	1	.377**
Sig. (2-tailed)		.003
N	59	59
CEPT Pearson Correlation	.377**	1
Sig. (2-tailed)	.003	
N	59	59

Table 6 shows that there was a positive correlation between the awareness level of the selectiveness of derivation constraint at the p. value 0.003 ($p. \leq 0.01$) and the r value 0.377. This means that the Thai learners with higher scores of Cambridge English Placement Test (CEPT) were significantly more successful in selecting the right parts of speech of the bases for the derivational affix attachment than those with lower CEPT scores.

Discussion and Conclusion

The current findings supported Ward and Chuenjundaeng (2009) in that the learners with a higher level of English proficiency (i.e., the Medicine-majored participants in Ward and Chuenjundaeng, 2009 and those with higher English GPA's and higher CEPT scores in this work) performed better in selecting the accurate parts of speech for complex-word derivation than those with a lower level of proficiency (i.e., the Engineering-majored participants in Ward and Chuenjundaeng, 2009 and those with lower English GPA's and lower CEPT scores in this work). Nevertheless, regardless of the levels of proficiency and with or without background in English Morphology courses (Kallayanamit, 2019 and this work, respectively), the Thai learners tended to find it challenging to overcome the selectiveness constraint, as witnessed by the overall "fair" performance in both Kallayanamit (2019) and this study and by the frequent failure to relate the base forms and their derived forms of both majors in Ward and Chuenjundaeng (2009). All these findings reconfirmed the claim about L1 transfer in L2 morphology in that the lack of the

selectiveness constraint in Thai (and probably also the unproductiveness of derivation and the lack of multiple derivation in Thai) slowed down the acquisition of the derivation of the English complex words, like the Chinese-English cases of Deng et al. (2016).

In addition, the current research supported the finding about the use of the “non-polysemous” suffixes “-ment, -ive, -ize” in Kallayanamit (2019). The attachment of the suffix “-ment” was more successful than that of “-ive” and “-ize,” respectively. The difference lied in the case of “-ness,” where the Thai learners performed “well” in Kallayanamit (2019) but “poorly” in this work. As for the “polysemous” affixes, both groups of the participants implemented the attachment of the affixes “-ly, -en, un-” in the same way. To be precise, the attachment of the adverb-forming suffix “-ly” as in “exactly, nervously” was achieved more frequently than that of its adjective-forming counterpart “-ly” as in “daily, cowardly.” Likewise, the attachment of the adjective-forming suffix “-en” as in “wooden, golden” was more successful than that of the verb-forming counterpart “-en” as in “fasten, deepen.” Also, the attachment of the prefix “un-,” meaning “not” as in “unusual, untidy” was managed better than that of “un-,” meaning “in an opposite direction” as in “undo, unload.” However, the two studies differed in the use of “-al,” where Kallayanamit (2019) found greater success in the adjective-forming suffix “-al” (e.g., environmental, agricultural) than the noun-forming counterpart “-al” (e.g., arrival, survival) as opposed to the reverse in this present work.

Apart from the aforementioned issues, this research offered a more thorough, refined description of the awareness of the selectiveness of derivation than Ward and Chuenjundaeng (2009) and Kallayanamit (2019) owing to two factors: (1) the greater number of affix stimuli (30 versus 15 targeted suffixes) and the greater number of complex-word targets (60 versus 15 words) and (2) the use of GPA's of English courses and the standardized CEPT scores to represent the participants' English proficiency levels. The non-polysemous affixes which were not tested in Kallayanamit (2019) consisted of “-like, -dom, -th, -able, -ous, -less,” and the polysemous affixes which had not been examined before were “-y, -ant, in-, dis-, de-, -ful.” Therefore, the current findings served as a detailed addition strengthening all the researches in regard to L2 morphology among Thai learners.

Two new issues were found from this study; namely, (1) the fewer challenges of the non-polysemous affixes and (2) the different levels of intrinsic difficulty of the complex words as the crucial factor of derivation success. First, as shown in Table (2), the Thai participants achieved the

derivation of the non-polysemous affixes (i.e., -like, -dom, -th, -ment, -ive, -able, -ize, -ous, -less, -ness) much more frequently than they did to the polysemous affixes (i.e., un-, in-, dis-, de-, -al, -ful, -ly, -en, -ant, -y) with the frequency of 68.47% versus 50.34%, respectively. The different levels of success as such were of no surprise because the lack of double meanings in non-polysemous affixes definitely caused less difficulty to the learners than the polysemous ones. In this research, most of the participants managed to select the accurate parts of speech of the bases for the attachment of the non-polysemous affixes, as evident in the absence of the overall “failed” performance in Table (3).

The last crucial point was the “intrinsic difficulty level” of the complex words. Following the “English Vocabulary Profile,” created by Cambridge University Press (which followed the Common European Framework of Reference for Languages (CEFR)) and shown on Cambridge Dictionary), this research found that the CEFR scales of the words under study had different impacts on the performance of the selectiveness of derivation. The higher the CEFR level of the word being formed was, the harder it was to achieve the derivational process. This claim was obvious in the cases of the following polysemous affixes: “-y, -al, in-, dis-, -en, -ant, -ful, un-.” As shown in Table (1) and Table (4), the CEFR levels of “honesty (B2), agricultural (C1), fasten (B1), deepen (C1), ignorant (C2), capful (B2), handful (C1), impose (C1), dishonest (B2), disloyal (C2), deactivate (C2), undo (B2), unload (C1)” all posed difficulty for the Thai learners. Consequently, the attachment of the affixes “-y, -al, -en, -ant, -ful, in-, dis-, un-” was achieved less frequently when they formed a *noun* (honesty, modesty), an *adjective* (agricultural), a *verb* (fasten, deepen), an *adjective* (ignorant), a *noun* (cupful, handful), “*into*” (incite, impose), “*not*” (dishonest, disloyal), and “*in an opposite direction*” (cupful, handful), respectively, than when they formed an *adjective* (healthy, wealthy), a *noun* (arrival, survival), an *adjective* (wooden, golden), a *noun* (assistant, servant), an *adjective* (successful, youthful), “*not*” (incorrect, invisible), “*in an opposite direction*” (disappear, disapproval), and “*not*” (unusual, untidy), respectively.

Compared to these words, the rest was less challenging: healthy (A2), wealthy (B2), arrival (B1), survival (B2), environmental (B1), incorrect (B1), invisible (B2), disappear (B1), disapprove (B2), exactly (A2), nervously (B2), daily (A2), cowardly (B2), wooden (A2), golden (A2), assistant (B1), servant (B2), pleasant (A2), successful (B1), unusual (A2), untidy (B1).” In brief, during the acquisitional path of EFL derivational process and selectiveness of derivation, the learners might



be challenged by several factors including not only L1 transfer and polysemy of the affixes but also the CEFR levels, or the inherent difficulty of the words, themselves.

Implications

The finding about the impacts of the CEFR levels of vocabulary on acquisition of selectiveness of derivation constraint suggests that English Morphology classroom learning should take the CEFR level specified in the students' curriculum into account so that the lessons are neither too difficult nor too easy for the students. Meanwhile, the teachers must bear in mind that the CEFR level required by the curriculum must be satisfied.

Recommendations for Future Studies

A research on teaching techniques on the selectiveness constraint on English complex-word derivation is recommended, especially in the cases of "polysemous" affixes and the cases which the participants failed to attach to the correct parts of speech.

References

- Balpho, W. (2000). *English syntax I* (Unpublished manuscript). Bangkok: Dhonburi Rajabhat University.
- Cambridge University Press. (n.d.). *International language standards*. Retrieved December 31, 2020, from <https://www.cambridgeenglish.org/exams-and-tests/cefr/>
- Deng, T., Shi, J., Dunlap, S., Bi, H., & Chen, B. (2016). Morphological knowledge affects processing of L2 derivational morphology: An event-related potential study. *Journal of Neurolinguistics*, 37, 47-57.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (2002). *The study of second language acquisition* (9th ed.). Oxford: Oxford University Press.
- Gass, S. M., & Selinker, L. (1994). *Second language acquisition: An introductory course*. New Jersey: Lawrence Erlbaum Associates.
- Iwasaki, S., & Ingkaphirom, P. (2005). *A reference grammar of Thai*. New York: Cambridge University Press.

- Kallayanamit, S. (2019). Thai learners' morphological awareness of English complex words and its effects on vocabulary-in-context usage. *Journal of Humanities Naresuan University*, 16(2), 1-22.
- Karlsson, M. (2015). Advanced students' L1 (Swedish) and L2 (English) mastery of suffixation. *International Journal of English Studies*, 15(1), 23-49.
- Lardiere, D. (2006). Words and their parts. In R. Fasold & J. Conner-Linton (Eds.), *An introduction to language and linguistics* (pp. 55-96). Cambridge: Cambridge University Press.
- Masrai, A. M. (2016). The influence of morphological knowledge on lexical processing and acquisition: The case of Arab EFL learners. *Ampersand*, 3, 52-60.
- Pasquarella, A., Chen X., Lam, K., & Luo, Y. C. (2013). Cross-language transfer of morphological awareness in Chinese-English bilinguals. *Journal of Research in Reading*, 34(1), 23-42.
- Saville-Troike, M. (2004). *Introducing second language acquisition* (3rd ed.). New York: Cambridge University Press.
- Ward, J., & Chuenjundaeng, J. (2009). Suffix knowledge: Acquisition and applications. *System*, 37, 461-469.
- Zhang, D. (2013). Linguistic distance effect on cross-linguistic transfer of morphological awareness. *Applied Psycholinguistics*, 34(5), 917-942.
- Zhang, D., Koda, K., & Sun, X. (2014). Morphological awareness in biliteracy acquisition: A study of young Chinese EFL readers. *International Journal of Bilingualism*, 18(6), 570-585.