The Acquisition of English Regular and Irregular Plural Morphemes by L1 Thai Learners: A Case of the Failed Functional Features Hypothesis

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Abstract

The purpose of the present study is to examine whether L1 Thai learners, whose native language lacks the plural inflection morphology, have acquired English regular and irregular plural morphemes and to see whether variability of L2 English regular and irregular plural morphemes by L1 Thai learners is caused by non-target-like syntactic representations under the assumption of the Failed Functional Features Hypothesis (FFFH). The participants were 36 Thai learners of English divided into two groups based on their proficiency levels: intermediate and advanced. Data were collected from a grammaticality judgement task and a cloze test. The results confirmed the Failed Functional Features Hypothesis (Franceschina, 2001; Hawkins & Chan, 1997) and contradicted the Missing Surface Inflection Hypothesis (Lardiere, 1998; Prévost & White, 2000) in that the L1 Thai learners failed to acquire English regular and irregular plural morphemes due to non-existence of plural inflection in Thai. Moreover, their use and judgement of L2 English plural morphemes was rather unsystematic. While some L1 Thai learners were assumed to draw upon their L1 knowledge to complete the tasks, others possibly resorted to linguistic cues showing plurality. The study contributes to Second Language Acquisition with respect to L2 variability and representation.

Keywords: L2 variability, English plural morphology, Thai learners, the Failed Functional Features Hypothesis, the Missing Surface Inflection Hypothesis

การรับหน่วยคำบ่งชี้ความเป็นพหูพจน์รูปปกติและรูปไม่ปกติใน ภาษาอังกฤษโดยผู้เรียนที่มีภาษาไทยเป็นภาษาที่หนึ่ง: กรณีศึกษา สมมติฐานแสดงลักษณะหน้าที่ที่ล้มเหลว

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บทคัดย่อ

งานวิจัยฉบับนี้ศึกษาลักษณะการแปรของหน่วยคำบ่งชี้ความเป็นพหูพจน์ในภาษาอังกฤษ โดยผู้เรียนที่มีภาษาไทยเป็นภาษาที่หนึ่ง วัตถุประสงค์หลักของงานวิจัยคือ ศึกษาว่าผู้เรียนชาวไทย สามารถรับหน่วยคำบ่งชี้ความเป็นพหูพจน์รูปปกติ (regular plural morphemes) และรูปไม่ปกติ (irregular plural morphemes) ในภาษาอังกฤษได้หรือไม่ และเพื่อศึกษาว่าการแปร (variability) ที่ปรากฏเป็นผลมาจากรูปแทนทางวากยสัมพันธ์ที่ไม่เหมือนเป้าหมาย (non-target-like syntactic representations) ตามสมมติฐานลักษณะแสดงหน้าที่ที่ล้มเหลว (Failed Functional Features Hypothesis) (Franceschina, 2001; Hawkins & Chan, 1997) หรือไม่ งานวิจัยนี้มีผู้เข้าร่วมวิจัย จำนวนทั้งหมด 36 คน แบ่งเป็นผู้เรียนที่มีทักษะภาษาอังกฤษในระดับกลางและผู้เรียนที่มี ทักษะภาษาอังกฤษในระดับสูง โดยเก็บข้อมูลจากแบบทดสอบตัดสินความถูกต้องทางไวยากรณ์ (Grammaticality Judgment Test) และแบบทดสอบเติมคำในช่องว่าง (Cloze Test) ผลงานวิจัย ยืนยันสมมติฐานแสดงลักษณะหน้าที่ที่ล้มเหลว (Failed Functional Features Hypothesis) (Franceschina, 2001; Hawkins & Chan, 1997) และขัดแย้งกับสมมติฐานการผันคำระดับพื้นผิว ที่หายไป (the Missing Surface Inflection Hypothesis) (Lardiere, 1998; Prévost & White, 2000) ทั้งนี้เป็นเพราะผู้เรียนชาวไทยทั้งสองกลุ่มไม่สามารถรับหน่วยคำบ่งชี้ความเป็นพหูพจน์รูปปกติ (regular plural morphemes) และรูปไม่ปกติ (irregular plural morphemes) ในภาษาอังกฤษได้ เนื่องจากหน่วยคำประเภทนี้ไม่ปรากฏในภาษาไทย ผลวิจัยยังชี้ให้เห็นถึงอสมมาตรในการใช้หน่วยคำ บ่งชี้ความเป็นพหูพจน์กล่าวคือ ในขณะที่ผู้เรียนบางกลุ่มใช้ภาษาแม่ในการตัดสินการใช้คำนาม รูปพหูพจน์ แต่บางกลุ่มใช้บริบทที่ชี้นำเพื่อใช้คำนามรูปพหูพจน์ ผลการวิจัยมีประโยชน์สำคัญในด้าน นัยยะทางภาษาศาสตร์ที่เกี่ยวกับการรับภาษาที่สองและนัยยะทางด้านการเรียนการสอน

คำสำคัญ การแปรในภาษาที่สอง หน่วยคำบ่งชี้ความเป็นพหูพจน์ในภาษาอังกฤษ ผู้เรียนชาวไทย สมมติฐานแสดงลักษณะหน้าที่ที่ล้มเหลว สมมติฐานการผันคำระดับพื้นผิวที่หายไป

1. Introduction

In the field of Second Language Acquisition (SLA), the issue of whether adult L2 learners are able to fully access Universal Grammar (UG) is still subject to debate. Many studies have attempted to examine whether adult L2 learners can access UG and, if they can, to what degree access might be.

Variability or non-native like production is well documented in SLA (e.g., Franceschina, 2001; Hawkins & Chan, 1997; Hawkins & Lizka, 2003). SLA scholars have viewed variability in L2 production of functional morphology as impairment and non-impairment of the L2 learners' grammar through two opposing hypotheses; that is, the Failed Functional Features Hypothesis (FFFH) (Franceschina, 2001; Hawkins & Chan, 1997) and the Missing Surface Inflection Hypothesis (MSIH) (Lardiere, 1998; Prévost & White, 2000). Thus, some learners' L2 acquisition may fully rely on UG, while others may not, suggesting that syntactic representations of L2 learners can be both 'non-target-like', favoring the impairment view, and 'target-like', supporting the non-impairment view.

Over the past few decades, many studies have looked into L2 acquisition of English plural morphemes. These studies have investigated acquisition by L2 learners with different L1 backgrounds, different ages, and different English language proficiency levels (e.g., Altarawneh & Hajjo, 2018; Adejare, 2019; Jia, 2003; Ninpanit & Pongpairoj, 2016; Phootirat, 2018). Specifically, English plural morphemes still appear to be a functional feature that represents the greatest challenge for L1 Thai learners of English (e.g., Pongpairoj, 2002; Sridhanyarat & Chaengchenkit, 2013; Widiatmoko, 2008; Watcharapunyawong & Usaha, 2012).

In the Thai context, to the best of our knowledge, there have been a limited number of studies investigating the acquisition of English plural morphemes (e.g., Ninpanit & Pongpairoj, 2016; Phootirat, 2018). These studies focused their attention on the acquisition of regular plural morphemes.

Specifically, no studies have been conducted to examine whether L1 Thai learners of English, whose native language has no plural inflectional morphology, have acquired English regular and irregular plural morphemes, under the assumption of non-target-like syntactic representation; that is, the Failed Functional Features Hypothesis (FFFH), and target-like syntactic representations; that is, the Missing Surface Inflection Hypothesis (MSIH). The current paper will examine this issue.

2. Literature Review

In this section, discussions on L2 variability (2.1), two perspectives on L2 variable production of functional morphology (2.2), plurality in English and Thai (2.3) and previous research studies on the acquisition of L2 English plural morphemes (2.4) will be provided.

2.1 L2 Variability

Tsimpli and Dimitrakopoulou (2007) defined the term 'L2 variability' or 'L2 optionality' as (in) consistent behavior of language learners in the target second language (L2), which is not similar to the performance of native speakers. In other words, variability reflects cases where L2 learners produce two linguistic variants—both correct and incorrect forms such as *'I not like reading.' and 'I don't like reading.' to show the same linguistic form as a native speaker, who would produce only one invariant form (i.e., 'I don't like reading.'). This suggests that two or more rules, both correct and incorrect, may be produced, resulting in variability. In the present study, variability concerns production of both the target-like L2 forms of English regular and irregular plurals, and their non-target counterparts.

2.2 Two Accounts of L2 Variable Production of Functional Morphology

2.2.1 The Failed Functional Features Hypothesis (FFFH)

The FFFH claims that variability occurs as a result of syntax impairment. In other words, this hypothesis views variable production of

L2 functional morphology as impairment of the L2 learners' grammar, thus suggesting that L2 learners' syntactic representations are non-target-like. Specifically, there appear to be two kinds of impairment: 'global' and 'local'. The position of global impairment is that first language acquisition (L1A) differs from second language acquisition (L2A). To be more specific, L1A is constrained by Universal Grammar (UG), but L2A is not. This suggests that UG is available only to L1 acquirers, not to late L2 acquirers (Smith & Tsimpli, 1995). Thus, it is assumed that late L2 learners whose L1s lack a particular feature cannot acquire it in their L2. Nevertheless, proponents of the local impairment position posit that differences between L1 and L2 grammars cause variability in L2 production of functional categories, which suggests that UG is only partially available to L2 learners through their L1 (Hawkins & Chan, 1997). This suggests late L2 learners whose L1 grammars do not activate a particular feature possibly experience difficulty in acquiring it in their L2, whereas those learners whose L1 grammars activate a particular feature will have less difficulty. Thus, under the assumption of the FFFH, L2 learners establish non-target-like syntactic representations of L2 functional morphology, perhaps owing to L1 and L2 differences in grammar (e.g., Franceschina, 2001; Hawkins & Chan, 1997; Hawkins & Lizka, 2003).

2.2.2 The Missing Surface Inflection Hypothesis (MSIH)

The MSIH views variability as a consequence of a processing problem that is unrelated to the learners' competence (Lardiere, 1998). This could mean that L2 learners fail to map morphological forms onto their appropriate abstract categories. Research has shown that this problem arises as a result of communication pressure or due to slips of the tongue (e.g., Chaengchenkit, 2011; Lardiere, 1998; Prévost & White, 2000; Thapthimhin & Pongpairoj, 2015). Thus, it is reasonable to assume that L2 variable production, for the MSIH, is not a result of impairment of syntactic representation. Proponents of the MSIH still argue that UG is fully available to L2 learners,

and L2 acquisition is governed by the UG. This suggests that non-existent L2 features or functional categories in a learner's L1 does not have a negative impact on L2 production. In other words, learners can acquire any L2 feature or functional category in L2 despite them being absent in their L1, owing to full accessibility of UG. Thus, under the assumption of the MSIH hypothesis, it is assumed that L2 learners can establish target-like syntactic representations of L2 functional morphology (e.g., Lardiere, 1998; Prévost & White, 2000; White, 2003).

2.3 Plurality in English and Thai

The following section provides information on plurality in English (2.3.1) and plurality in Thai (2.3.2)

2.3.1 Plurality in English

The English language is an inflectional language, which conveys grammatical relationships with inflections (Radford, 2004). Thus, plurality in English is formed with certain morphological processes. Specifically, English plurality is formed with either regular plural morphological markings or irregular plural morphological markings.

In regular cases, the inflection of the noun is used to express plurality in English, as shown in (1).

(1)   a. three **toys**
        b. many **boxes**
        c. a few job **vacancies**

Adapted from Lieber (2010, p. 99)

In (1a), plurality is expressed through the inflection of the plural morpheme '−s' on the noun 'toy', and in (1b) plurality is expressed through the inflection of the plural morpheme '−es' on the noun 'box', which ends with the sibilant sounds (/s/, /z/, /ʃ/, /tʃ/, /ʒ/, /dʒ/). In (1c),

plurality is formed with the plural morpheme '–ies' on the noun 'vacancy', which ends with '–y'.

In irregular cases, English plurality is formed through the morphological processes of syncretism and internal stem change which can be further divided into vowel changes and suffix changes (Lieber, 2010) as shown in (2).

(2) a. five **fish**
   b. few **geese**
   c. many **children**

<div align="right">Adapted from Lieber (2010, p. 101)</div>

In (2a), plurality is expressed through the inflection of zero morphemes[1] on the noun 'fish'. This process refers to syncretism, which is where the word form remains the same when reflecting plurality. In (2b) and (2c), plurality is formed through the process of internal stem change, including the change of vowel, 'goose' [guːs] **—** 'geese' [giːs] and the change of suffix, 'child' **—** 'child**ren**'.

2.3.2 Plurality in Thai

Thai is an isolating language, which shows grammatical relationships through lexical items. Thus, plurality in Thai is formed through numeral classifiers and context (e.g., Iwasaki & Ingkaphirom, 2005; Pongpairoj, 2002). Specifically, plurality or 'more-than-one' aspect in Thai is shown through a numeric phrase which consists of a cardinal number followed by a classifier (Iwasaki & Ingkaphirom, 2005), as shown in (3).

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[1] A zero morpheme—or a null morpheme refers to a morpheme that has no spell-out form (Lieber, 2010), indicating that the derived form is identical to the stem.

(3)   a. mǎa   [sǎːm   tua]

        dog   three   CL

        'three dogs'

Adapted from Iwasaki and Ingkaphirom (2005, p. 62)

In (3a), the head noun /mǎa/ 'dog' is modified by the numeric phrase which consists of the cardinal number /sǎːm/ 'three' and the classifier /tua/. Such a phrase is used to express plurality in Thai.

Apart from a numeric phrase, plurality in Thai can be inferred through context (e.g., Piriyawiboon, 2010; Pongpairoj, 2002) as shown in (4).

(4)   a. nák riːan   mɔː   hâː

        student   matthayom five

        'grade eleven students'

Adapted from Iwasaki and Ingkaphirom (2005, p. 62)

In (4a), there is no numeric phrase indicating plurality, but the audience can infer plurality from the context in the way that there might be more than one student in grade eleven. Thus, the numeral classifier is necessary in showing plurality in Thai, perhaps owing to the fact that it can help minimize vagueness (Piriyawiboon, 2010).

In summary, English uses plural inflectional morphology in showing plurality, while Thai uses a specific numeric phrase or context to express plurality.

2.4 Previous Research Studies on the Acquisition of L2 English Plural Morphemes

This section reviews previous studies on the acquisition of L2 English plural morphemes by L2 learners with different L1 backgrounds.

Jia (2003) conducted a longitudinal research study investigating the acquisition of English plural morphemes by Chinese learners of English. Data collected from a picture description task and a spontaneous speech

task revealed that seven out of ten L2 Chinese learners were able to acquire the English plural morphemes within five years. Nevertheless, it was found that they produced English plural morphemes variably in the beginning, but this decreased later. It was concluded that variable production might arise from the learners' L1 and age differences.

Ninpanit and Pongpairoj (2016) studied the acquisition of English plural morphemes by L1 Thai learners under the assumption of the 'Failed Functional Feature Hypothesis' (FFFH). The participants were 20 Thai learners divided into two groups: a high proficiency group and a low proficiency group. Data from a grammaticality judgement task (GJT) and a cloze test showed that the L1 Thai learners produced low suppliance rates of English plural morphemes. Moreover, it was found that the learners performed better when some linguistic cues (e.g., cardinal numbers) showing plurality were present, thus indicating asymmetry. It was concluded that L1 Thai learners experienced difficulty in acquiring English plural morphemes because of differences between Thai and English.

Altarawneh and Hajjo (2018) investigated the acquisition of the English plural morphemes by 60 Arabic-speaking EFL learners divided into two groups: a low proficiency group and an intermediate proficiency group. Data were collected from a grammaticality judgement task (GJT). The results showed that the learners had little awareness of English plural morphemes. The researchers concluded that the errors produced by both groups of learners occurred as a result of the difference between English and Arabic and the frequency of nouns selected.

Phootirat (2018) studied the production of English plural morphemes of 20 Thai learners of English, who were divided into two groups: a low proficiency group and a high proficiency group. Data collected from a picture storytelling task and a short sentence reading task showed that high proficiency learners produced significantly higher correct suppliance rates of English plural morphemes in both tasks compared to low proficiency

learners. Phootirat concluded that the learners' low inflection of English plural morphemes may have been the result of problems in speaking ability.

Adejare (2019) investigated the acquisition of English plural morphemes of 15 Nigerian learners. Data from written production showed high levels of correct suppliance rates of English plural morphemes (93%) and low levels of incorrect suppliance rates (7.14%). It was concluded that the learners' high correct suppliance rates of English plural morphemes may have been a result of high exposure to the rules of English plurality. Moreover, the learners' errors occurred as a result of L1 interference as English has inflectional plural morphemes, but Nigerian does not.

The results from these studies suggests that variable production of L2 grammars occurs as a result of L1 interference. As mentioned earlier, there have been a limited number of studies investigating the acquisition of English plural morphemes by L1 Thai learners (e.g., Ninpanit & Pongpairoj, 2016; Phootirat, 2018). To the best of our knowledge, no studies have investigated the acquisition of irregular plural morphemes by L1 Thai learners of English. The present study therefore aims to examine the acquisition of English regular and irregular plural morphemes by L1 Thai learners, whose native language has no plural inflection morphology, under the assumption of non-target-like syntactic representation; that is, the Failed Functional Feature Hypothesis (FFFH).

Research Objectives

1. To investigate whether L1 Thai learners of English, whose native language lacks plural inflection morphology, have acquired English regular and irregular plural morphemes.

2. To determine whether the variability of L2 English regular and irregular plural morphemes by L1 Thai learners is caused by non-target-like syntactic representations under the assumption of the Failed Functional Features Hypothesis (FFFH).

Hypotheses

1. L1 Thai learners of English fail to acquire English regular and irregular plural morphemes due to the lack of plural inflection morphology in Thai.

2. The variability of English regular and irregular plural morphemes by L1 Thai learners occur as a result of non-target-like syntactic representations based on the Failed Functional Feature Hypothesis (FFFH) (Franceschina, 2001; Hawkins & Chan, 1997), rather than target-like syntactic representations based on the Missing Surface Inflection (MSIH) (Lardiere, 1998; Prévost & White, 2000).

3. Methodology

This section discusses the research methodology, providing information on the subjects (3.1), a description of the instruments (3.2), data collection (3.3), and data analyses (3.4).

3.1 Participants

The participants of the study were 36 L1 Thai learners of English divided into two proficiency groups: an intermediate group (N = 18) and an advanced group (N = 18), based on their performance on the Oxford Quick Placement Test (OQPT) (Syndicate, 2001). The intermediate group's scores ranged from 38-46 (M = 40.16), while the advanced group's scores ranged from 48-62 (M = 58.22). At the time of experiment, the participants were studying in grade 11 at a public school in Pathum Thani, Thailand (age range = 16-17 years old). All the participants had been studying English in a formal education program for approximately 10 years. We excluded students who had studied in English programs. None of the participants had ever been to study in an English-speaking country.

3.2 Instruments

There were three instruments used to collect the data in this study: the questionnaire for participants (3.2.1) the Grammaticality Judgment Task (GJT) (3.2.2), and the Cloze Test (CT) (3.2.3).

3.2.1 Questionnaire for Participants

A questionnaire was designed to collect personal and academic information about the participants. It contained nine items.

3.2.2 Grammaticality Judgment Task (GJT)

The Grammaticality Judgement Task was constructed to investigate participants' underlying knowledge of English plural morphemes. In total, there were 40 test items consisting of 16 target test items and 24 distractors. The target test items were presented in random order and mixed with distractor items. The 16 target test items were divided into two equal groups based on two types of nouns: eight test items for regular countable nouns and eight test items for irregular countable nouns, as shown in Table 1.

Table 1

Lists of Regular and Irregular Countable Nouns in English for Each Context in the GJT

Regular Nouns (N = 8)		Irregular Nouns (N = 8)	
Linguistic cues (N = 4)	No cues (N = 4)	Linguistic cues (N = 4)	No cues (N = 4)
teenager, passenger, friend, lecturer	lawyer, toy, activity, table	children, women, criteria, oxen	bacteria, data, phenomena, teeth

The vocabulary items in both the GJT and the CT were selected from vocabulary lists provided by the National Institute for Educational Testing Service (NIETS) of Thailand because they were mandatory lexical items for grade 10-12 students and were included in their English textbooks.

As shown in Table 1, among these eight test items for regular nouns, four items were designed to have linguistic cues showing plurality (e.g., cardinal numbers & quantifiers), while the other four had no cues. One major reason for this was to examine whether there appeared asymmetric suppliance rates of English plural morphemes. Furthermore, two test items in each context were in grammatically correct forms, while the other two test items were in grammatically incorrect forms. Similarly, among the eight test items for irregular nouns, four items were designed to have linguistic cues showing plurality, while the other four items had no cues. Two test items in each context were in grammatically correct forms, while the other two test items were in grammatically incorrect forms. In addition, many grammatical features such as adjectives, infinitives, adverbs, nouns and gerunds were used in distractor items so that the participants would not be aware of the target test items. To make the variable constant, the test items were in the past tense to avoid the problem of subject-verb agreement. For this task, participants were required to examine whether each item was correct, as shown below in (1):

(1)   (a) _____ ( ) There were several **criterions** used in selecting people for promotion.
       (b) _____ ( ) Researchers collected available **data** over a 10-day period.
       (c) _____ ( ) All Marvin's sisters became **lawyer** last year.
       (d) _____ ( ) Ten **teenagers** who had been addicted to drugs went to prison.

In (1a), the irregular noun 'criterions' was in the grammatically incorrect form and preceded by the linguistic cue 'several' indicating plurality, while in (1b), the irregular noun 'data' was in the grammatically correct form and not preceded by any cue. In (1c), the regular noun

'lawyer' was in the grammatically incorrect form and not preceded by any cue, while in (1d), the regular noun 'teenagers' was in the grammatically correct form and preceded by the linguistic cue 'ten' showing plurality. The participants were asked to analyze the underlined part of each sentence carefully. If the underlined part of each sentence was correct, they were required to mark (✔) in the parentheses. If it was grammatically incorrect, participants were required to mark (✘) in the parentheses and provide the correct version in the blank given.

3.2.3 Cloze Test (CT)

The cloze test was used to examine the participants' production of English plural morphemes. In total, there were 40 test items consisting of 16 target test items and 24 distractors. The target test items were presented in random order and mixed with distractor items. The 16 target test items were divided into two equal groups in accordance with two types of nouns: eight test items for regular countable nouns and eight test items for irregular countable nouns, as shown in Table 2.

Table 2

Lists of Regular and Irregular Countable Nouns in English for Each Context in the CT

Regular Nouns (N = 8)		Irregular Nouns (N = 8)	
Linguistic cues (N = 4)	No cues (N = 4)	Linguistic cues (N = 4)	No cues (N = 4)
story, prisoner, vacancy, tiger	worker, pocket, restaurant, technique	fish, leaf, crisis, mouse	foot, person, goose, quiz

The regular and irregular countable nouns selected for the cloze test were different from the nouns employed in the GJT. Among the eight test items for regular nouns, four items were designed to have linguistic

cues indicating plurality, while the other four had no cues. One major reason for this was to examine whether there appeared asymmetry of English plural morpheme suppliance rates. Similarly, among the eight test items for irregular nouns, four items were designed to have linguistic cues showing plurality, while the other four other items had no cues. Several grammatical features such as adjectives, infinitives, adverbs, nouns and gerunds were used in distractor items. For this task, the participants were asked to change the words given in the parentheses into the correct form, as shown below in (2):

(2)   (a) Thomson and his son wrote many _____ (**story**) about crimes.

        (b) Last year, many international companies in Thailand were looking
            forward to hiring bilingual _____ (**worker**).

        (c) They were happy because they had caught a few _____ (**fish**[2]) that day.

        (d) John did not wipe his_____ (**foot**) before coming into the house.

The two tasks were inspected for appropriateness and grammaticality by three experts through the Index of Item-Objective Congruence (IOC) (Rovinelli & Hambleton, 1976). These three experts were English language lecturers in the English Department at the Faculty of Arts, Chulalongkorn University. All of the test items used in the study passed the IOC, with rates of 0.958 for the GJT and 0.979 for the CT.

3.3 Data Collection

The whole process of data collection took place at the school in a quiet classroom. In the initial step, a questionnaire was administered to grade 11 students to determine their education and language background. Participants who were studying in English programs or who had studied in English-speaking countries were excluded. The OQPT was then administered

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[2] In this specific context, fish is used to refer to 'multiple fish'; that is, they are of the same species of fish, not multiple species of fish.

to the participants who were studying in grade 11 of an English formal education program to determine their English proficiency level. We next divided participants into two proficiency groups: an intermediate group (N = 18) and an advanced group (N = 18), based on their scores on the OQPT.

In the following week, the data were collected in a counterbalanced manner, a research methodology proposed by Zeelenberg and Pecher (2015); that is, half of the participants in each group were required to complete the GJT and the CT, respectively, and the other half completed it in reverse order. The reason for this was to eliminate potential influences of task order on participant performance. The participants were asked to complete each task in no more than 30 minutes.

3.4 Data Analyses

For the GJT, each item was worth one point. The participants received one point if they made a correct judgement on a grammatically correct item or made a correct judgement on a grammatically incorrect item with a grammatically accurate correction. This could show that the participants had some knowledge of English plural morphology. Nevertheless, the participants did not receive any score if they made a correct judgement on a grammatically incorrect item with a grammatically inaccurate correction. This would suggest that they did not really understand English plural morphology.

Similar to the GJT, each item in the CT was worth one point. The participants received one point for providing a grammatically correct answer and this showed that the participants had some knowledge of English plural morphology. By contrast, the participants did not receive any score if they provided a grammatically incorrect answer or did not provide any answer.

4. Results and Discussion

Table 3 shows compares performance from the Grammaticality Judgement task and the Cloze Test.

Table 3

Results of the Correct Suppliance Rates of English Regular and Irregular Plural Morphemes in the Grammaticality Judgement Task and the Cloze Test by L1 Thai Participants

Accuracy	GJT						CT					
	Regular			Irregular			Regular			Irregular		
Groups	Raw Scores (144)	Percentages	Mean scores	Raw Scores (144)	Percentages	Mean scores	Raw Scores (144)	Percentages	Mean scores	Raw Scores (144)	Percentages	Mean scores
Intermediate (N= 18)	79	54.86	4.38	58	40.27	3.22	80	55.55	4.44	49	34.00	2.72
Advanced (N= 18)	93	64.58	5.16	80	55.55	4.44	94	65.27	5.22	79	54.86	4.38

For the regular plural morphemes, the intermediate group performed slightly better in the Cloze Test (55.55% or M = 4.44) than in the Grammaticality Judgement Task (54.86% or M = 4.38). Similarly, the advanced group scored slightly better in the Cloze Test (65.27% or M = 5.22) than in the Grammaticality Judgement Task (64.58% or M = 5.16). The results indicate that participants in both groups correctly supplied the regular plural morphemes slightly more in the Cloze Test than in the Grammaticality Judgement Task.

For the irregular plural morphemes, the intermediate group performed better in the Grammaticality Judgement Task (40.27% or M = 3.22) than in the Cloze Test (34% or M = 2.72). The results revealed that the participants in both groups had better production of the irregular plural morphemes in the Grammaticality Judgement Task than in the Cloze Test.

As seen in Table 3, the correct suppliances of English regular and irregular plural morphemes by both proficiency groups on the Grammaticality Judgement Task and the Cloze Test were lower than the 80% criterion of morpheme acquisition (Dulay & Burt, 1974). Nevertheless, both proficiency groups had better production of regular plural morphemes than irregular plural morphemes in both tasks. Specifically, it was found that the inaccurate use of regular plural morphemes by both proficiency groups in the Grammaticality Judgement Task and the Cloze Test was due to the omission of plural inflections. That is, the plural '–s' morpheme was omitted in obligatory plural contexts (e.g., '*six foreign lecturer' & '*bilingual worker'). Concerning irregular plural morphemes, it was observed that the inaccurate use by both proficiency groups in both tasks was the overgeneralization of plural inflections (e.g., '*a few fishes' and '*oxens'). This could have been due to the effects of transfer of training which refers to instruction or textbooks, giving rise to variability (Selinker, 1972). Specifically, it was found that in Unit 71 of an English textbook for secondary 4-6 levels— *English Grammar in Use by Raymond Murphy, 1985*, which is widely used in English classrooms in Thailand, the regular plural morpheme '–s' was more focused on than irregular plural morphemes. For example, it was found that the textbook describes how it is necessary to add the '–s' or '–es' suffix to countable nouns to make plurals, but there was no mention of irregular plural morphemes at all. This bias might explain why L1 Thai learners erroneously use the '–s' and '–es' suffix for all countable nouns without considering that there are other types of noun; that is, irregular nouns, which adopt certain morphological processes in order to make plurality. Thus, it is assumed that both the omissions and overgeneralization of English plural morphemes by L1 Thai learners occurred as a result of differences between Thai and English plurality. This is, English uses plural inflectional morphology in showing plurality, while Thai uses certain numeric phrases and context to express plurality (See Section 2.3). This suggests that the

L1 Thai learners' grammatical representation of English plurality is in deficit. If the L1 Thai learners' grammatical representation of English plurality had not been impaired, they should have been able to judge and supply the appropriate plural morphemes in both regular and irregular forms. The results were in accord with some previous studies (e.g., Adejare, 2019; Altarawneh & Hajjo, 2018; Jia, 2003; Ninpanit & Pongpairoj, 2016) in the way that L2 learner variability occurred as a result of L1 interference. The results therefore confirmed the first hypothesis; that is, L1 Thai learners of English fail to acquire the English regular and irregular plural morphemes due to the lack of plural inflection morphology in Thai. The learners' inaccurate use of English plural morphemes was assumed to be due to a lack of grammatical representations of English plurality based on the FFFH, rather than as a result of processing problems as predicted by the MSIH. If the cause of variable production of English plural morphemes had been due to the processing problems, the learners' accurate scores in both tasks should have been higher and appropriate at the same rates. Thus, the second hypothesis, stating that variability of the English regular and irregular plural morphemes by L1 Thai learners occurs as a result of non-target-like syntactic representations based on the FFFH, not the target-like syntactic representations based on the MSIH, was confirmed.

The next part presents the correct suppliance rates of English regular and irregular plural morphemes in contexts with and without cues in the Grammaticality Judgement Task by L1 Thai participants.

Figure 1

Results of the Correct Suppliance Rates of English Regular and Irregular Plural Morphemes in Each Context in the Grammaticality Judgment Task by L1 Thai Participants
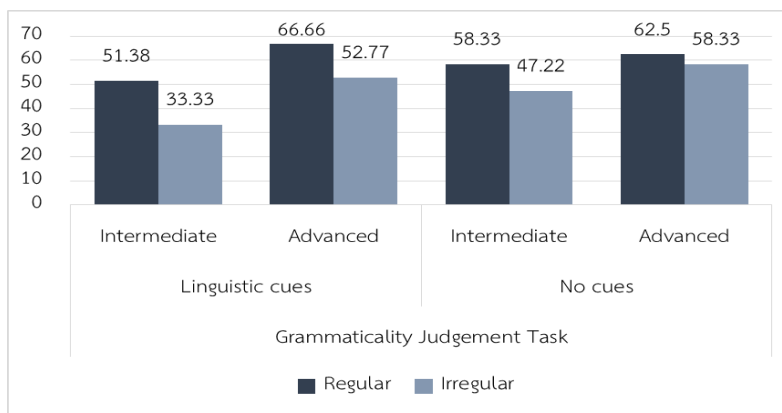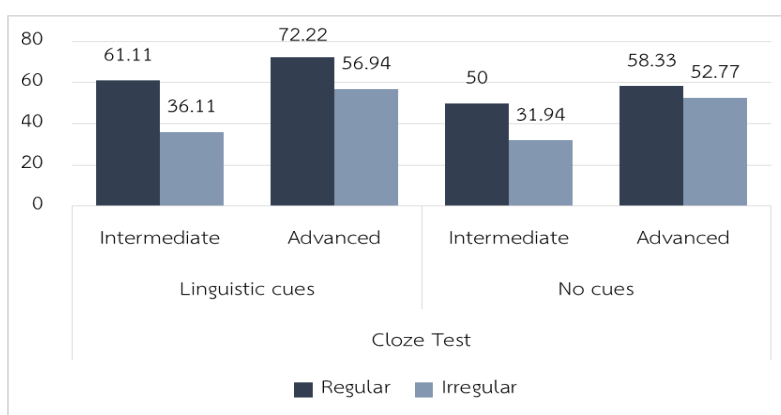

For the regular plural morphemes, the data in Figure 1 indicate that the intermediate group performed better in contexts without any cues showing plurality (58.33%) than in those with linguistic cues (51.38%). On the other hand, the advanced group performed better in contexts with linguistic cues indicating plurality (66.66 %) than in those without any cues (62.50%).

For the irregular plural morphemes, the intermediate group performed better in contexts without any cues showing plurality (47.22%) than in those with linguistic cues (33.33%). Similarly, the advanced group had slightly better correct suppliance rates in contexts without cues (58.33%) than in those with linguistic cues indicating plurality (52.77%). The results showed that participants in both groups had much better production of English regular and irregular plural morphemes in contexts without cues, except the advanced group which was found to perform better on the regular plural morphemes in contexts with linguistic cues.

Figure 2 presents the correct suppliance rates of English regular and irregular plural morphemes in contexts with and without cues in the Cloze Test Task by L1 Thai participants.

Figure 2

Results of the Correct Suppliance Rates of English Regular and Irregular Plural Morphemes in Each Context in the Cloze Test by L1 Thai Participants

For the regular plural morphemes, the data in Figure 2 show that the intermediate group performed better in contexts with linguistic cues indicating plurality (61.11%) than in those without any cues (50%). Similarly, the advanced group performed better in contexts with linguistic cues (72.22 %) than in those without any cues (58.33%).

For the irregular plural morphemes, the intermediate group performed better in contexts with linguistic cues showing plurality (36.11%) than in those without any cues (31.94%). Similarly, the advanced group had better correct suppliance rates in contexts with linguistic cues (56.94%) than in those without cues (52.77%). The results indicate that participants in both groups had much better production of English regular and irregular plural morphemes in contexts with linguistic cues than in contexts without cues, which was the reverse of the GJT; that is, the participants in both groups

correctly supplied regular plural morphemes and irregular plural morphemes better in contexts without cues showing plurality, except the advanced group which was found to perform better on the regular plural morphemes in contexts with linguistic cues.

It can be seen that the participants in both groups had better production of English regular and irregular plural morphemes in contexts with linguistic cues than in those without cues in the Cloze Test, which was the reverse of the GJT. That is, both proficiency groups judged English regular and irregular plural morphemes better in contexts without cues than in those with linguistic cues. The exception was that the advanced group performed better on regular plural morphemes in contexts with linguistic cues. The explanation for this could be that some of L1 Thai learners may draw upon their L1 knowledge in which plurality can be inferred through contexts to complete the tasks, while other learners may resort to using linguistic cues that show plurality, thus resulting in the asymmetric patterns of suppliances of English plural morphemes that we observed. This asymmetry of English plural morphemes in both contexts with and without cues indicating plurality in both the GJT and the Cloze Test suggest that the L1 Thai learners have impaired grammatical representations of English plurality. If the L1 Thai learners' plural grammatical representations were not in deficit, the presence and absence of cues showing plurality should not have had any effects on the learners' judgment and production of the plural morphemes in both tasks. Thus, the learners' asymmetric use of English plural morphemes across the contexts was assumed to be due to the lack of grammatical representations of English plurality according to the FFFH rather than the processing problems that are predicted by the MSIH.

The MSIH cannot account for such asymmetries of English plural morphemes by L1 Thai learners. Based on the MSIH, the L2 learners, no matter whether their L1 has no plural inflectional morphology or not,

should be able to use correct plural morphemes across contexts in both tasks due to their target-like syntactic representation of plurality. If the L1 Thai learners possessed correct grammar of plurality, asymmetric rates of English plural morphemes, both regular and irregular, across the contexts should not have occurred.

5. Conclusion, Implications and Limitations

The results obtained in this study support the Failed Functional Features Hypothesis (FFFH), over the Missing Surface Inflection Hypothesis (MSIH). The data suggest that the L1 Thai learners of English fail to acquire English regular and irregular plural morphemes due to a lack of plural inflection morphology in the Thai grammatical system, resulting in variability in production of L2 English plural morphemes.

Some pedagogical implications can be drawn from this study. Firstly, due to non-existence of plural inflection morphology in the L1 Thai grammatical system, teachers should emphasize both regular and irregular plural morpheme usage in English. Emphasis could be made on the learners' exposure to authentic materials involving the use of English plurality such as grammar picture books and videos. Secondly, it was inferred that different learners have different strategies in using English plural morphemes; that is, some learners draw upon their L1 knowledge to pluralize nouns, while others resort to linguistic cues showing plurality. Teachers should therefore focus more on different types of practice in using plural morphemes in context with and without linguistic cues to promote fluency such as essay writing and gap-filling exercises, respectively. Teachers may also use communicative tasks such as think-pair-share activities to enhance the learners' comprehension of English plural morphemes.

There are some limitations in this study. Firstly, it is a small-scale study with a relatively small number of participants. Further studies should be conducted with a larger number of L2 participants in order to

make better generalizations. Secondly, the participants in this study were from the same L1 background. Future research could compare and contrast L2 participants from L1 backgrounds with and without plural inflection morphology.

Acknowledgements

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