



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

An Analysis of English Subject-Verb-Agreement and Verb Inflections by Morpho-Syntactic Approach for EFL Teaching at Rajamangala University of Technology, Thailand

Lakkana Bunnarong¹/Suwaree Yordchim²/Cholthicha Sudmuk³/Suphat Sukamonson⁴
Phuwithch Ngwiline⁵/ Kirk Person⁶/ Kridsada Krudthong⁷

^{1,2,3,5,6,7} Department of Linguistics, Suan Sunandha Rajabhat University

⁴ Meajo University

Email: pao_pao2523@hotmail.com

Email: suwaree.yo@ssru.ac.th

Email: cholthicha.su19@gmail.com

Email: kirkroger.pe@ssru.ac.th

Received 16 February 2023; Accepted 3 April 2023; Published 4 April 2023

Abstract

This study aimed to improve English as a foreign language (EFL) Thai students' writing on the subject-verb agreement (SVA) using a mixed research method with two phases. The results of the content analysis revealed one simple system of generating English SVA patterns and verb inflection forms analyzed based on the Minimalist Program (MP) in the framework of the morpho-syntactic approach from General English textbooks used by the nine RMUT campuses in the academic year 2020. The system of the interface between English SVA requirements in syntax and verb inflection formations in morphology constructs SVA patterns with the proper verb forms through the morphological processes of suffixation and suppletion. In the 2nd phase, the samples were sixty-three Business English freshmen from the Rajamangala University of Technology, Wang



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Klai Kangwon Campus (RMUTR), which was determined by the Krejcie & Morgan table and selected by simple random sampling. The findings unveiled 1) the contents of the CLT teaching materials in the PowerPoint templates applied from the models of the content analysis for the writing lessons, which created four topics that combined the knowledge of syntax and the morphology of word formation in verb inflection to construct English SVA sentences in various contexts, 2) the students gained significantly higher average scores at $p=0.001$, and the effect size (Cohen's d) at 1.18 was a huge effect size after using the CLT teaching materials, and 3) the overall average scores of the student's satisfaction in all three aspects towards the CLT teaching materials were 4.71/5.00 ($SD.=0.32$), reflecting a very high level of satisfaction. The findings of the study suggest that CLT teaching materials that combine the knowledge of English syntax and morphology can be used to help students produce English SVA patterns and verb inflection forms more accurately.

Keywords

Subject and verb agreement (SVA), Verb inflection forms, English as a foreign language (EFL), Minimalist Program (MP), Morpho-syntactic approach



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

การวิเคราะห์ความสอดคล้องระหว่างประธานกับกริยาและการผันกริยา ในภาษาอังกฤษโดยแนวคิดระดับไวยากรณ์ของหน่วยคำ สำหรับการสอนภาษาอังกฤษ ในฐานะภาษาต่างประเทศของมหาวิทยาลัยเทคโนโลยีราชมงคล ประเทศไทย

ลักขณา บุญณรงค์¹/ สุวีรีย ยอดฉิม²/ ชลธิชา สุตมุข³/ สุพัฒน์ สุกมลสันต์⁴
ภูวิชญ์ จิวลาัย⁵/ Kirk Person⁶/ กฤษดา กรุดทอง⁷

^{1,2,3,5,6,7} สถาบันภาษา มหาวิทยาลัยราชภัฏสวนสุนันทา

⁴ มหาวิทยาลัยแม่โจ้

Email: pao_pao2523@hotmail.com

Email: suwaree.yo@ssru.ac.th

Email: cholthicha.su19@gmail.com

Email: kirkroger.pe@ssru.ac.th

รับต้นฉบับ 16 กุมภาพันธ์ 2566; ปรับแก้ไข 3 เมษายน 2566; รับผิดชอบ 4 เมษายน 2566

บทคัดย่อ

งานวิจัยนี้จัดทำขึ้นเพื่อพัฒนาการเขียนของนักศึกษาที่เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศ เรื่องความสอดคล้องระหว่างประธานกับกริยาและการผันกริยา (Subject-Verb-Agreement: SVA) โดยใช้รูปแบบการดำเนินการวิจัยแบบการวิจัยผลสมวิธี 2 ขั้นตอน ในขั้นตอนแรก ด้านการวิเคราะห์เนื้อหา พบว่าการผลิตโครงสร้าง SVA และรูปแบบกริยาที่ผันในภาษาอังกฤษ มีเพียงแค่หนึ่งระบบเท่านั้น โดยการวิเคราะห์ตามเฟรมเวิร์คมินิมัลลิสต์โปรแกรมในระดับไวยากรณ์ของหน่วยคำ จากในหนังสือเรียนรายวิชาภาษาอังกฤษทั่วไปที่ใช้ในปีการศึกษา 2563 โดยมหาวิทยาลัยเทคโนโลยีราชมงคลทั้ง 9 แห่ง ซึ่งมีระบบที่สัมพันธ์กันระหว่างกฎของ SVA ในระดับวากยสัมพันธ์และกระบวนการผันกริยาในระดับวิทยาหน่วยคำในภาษาอังกฤษทำให้สามารถสร้างโครงสร้าง SVA ได้ถูกต้องและครบทุกรูปแบบผ่านกระบวนการผันกริยาในระดับวิทยาหน่วยคำ โดยการเติมหน่วยคำท้าย (inflectional suffix) รากศัพท์ของคำกริยา และการแทนที่รากศัพท์ของกริยาคำอื่น (suppletion) ส่วนในขั้นตอนการดำเนินการวิจัยขั้นที่ 2 มีกลุ่มตัวอย่างเป็นนักศึกษาสาขาวิชาภาษาอังกฤษธุรกิจชั้นปีที่ 1 จากมหาวิทยาลัย



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

เทคโนโลยีราชชมงคลรัตนโกสินทร์ วิทยาเขตวังไกลกังวล จำนวน 63 คน โดยกำหนดขนาดของกลุ่มตัวอย่างโดยใช้ตารางสำเร็จรูปของเครจซี่และมอร์แกน (Krejcie & Morgan) และคัดเลือกกลุ่มตัวอย่างด้วยการสุ่มตัวอย่างแบบง่าย ผลการศึกษาพบว่า 1) เนื้อหาที่ได้สร้างขึ้นในสื่อการสอนตามแนวคิดการสอนภาษาเพื่อการสื่อสาร (Communicative Language Teaching: CLT) ในโปรแกรมพาวเวอร์พอยท์ (PowerPoint) ได้สร้างขึ้นจากการประยุกต์ใช้โมเดลของการวิเคราะห์เนื้อหา สำหรับสร้างบทเรียนการเขียนภาษาอังกฤษ จำนวน 4 หัวข้อ ที่มีกรรวมความรู้ด้านวากยสัมพันธ์ (syntax) และวิยาหน่วยคำ (morphology) ของการสร้างคำ (word formation) กรียาที่ผันในภาษาอังกฤษเพื่อผลิตโครงสร้าง SVA ในบริบทต่าง ๆ 2) นักศึกษาได้คะแนนเฉลี่ยสูงขึ้นหลังจากใช้สื่อการสอนแบบ CLT อย่างมีนัยสำคัญที่ค่า 0.001 และมีขนาดของผล (Cohen's d) ที่ 1.18 ซึ่งเป็นค่าผลที่มีขนาดใหญ่มาก 3) มีผลคะแนนเฉลี่ยโดยภาพรวมจากการประเมินความพึงพอใจของนักศึกษาที่มีต่อสื่อการสอนแบบ CLT ที่ 4.71/ 5.00 มีค่าเบี่ยงเบนมาตรฐาน (SD.=.316) หรือมีความพึงพอใจอยู่ในระดับมากที่สุด จากผลการวิจัยนี้สามารถนำไปใช้ประโยชน์ในการเรียนภาษาอังกฤษที่ใช้สื่อการสอนแบบ CLT ที่บูรณาการความรู้ทั้งวากยสัมพันธ์ และวิยาหน่วยคำภาษาอังกฤษช่วยให้นักศึกษาสามารถเขียนโครงสร้าง SVA ในภาษาอังกฤษและรูปแบบกรียาที่ผันได้ถูกต้องแม่นยำยิ่งขึ้น

คำสำคัญ

ความสอดคล้องระหว่างประธานกับกรียา การผันกรียาในภาษาอังกฤษ การสอนภาษาอังกฤษในฐานะภาษาต่างประเทศ เฟรมเวิร์คมินิมลิสต์โปรแกรมในระดับไวยากรณ์ของหน่วยคำ



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Statement of the problems

In Thailand, English has been taught as a foreign language, henceforth EFL, for a century. However, the English proficiencies of Thai students are still not satisfactory compared to other countries in the ASEAN community, in which Thailand was ranked 89th out of 100th behind Vietnam, Indonesia, and Cambodia (EF EPI, 2020). The Rajamangala University of Technology of Rattanakosin (RMUTR) is one of nine Rajamangala Universities of Technology in Thailand (RMUT) that has the General English course as a compulsory course in RMUT curriculums (2022). The RMUT students in every program must achieve and use English vocabulary to form basic structures and expressions in contextualized social language with the integration of four basic skills.

The SVA is one of the most common errors in EFL students' writing (Radin & Fong, 2014). In Bunnarong et al.'s study (2020), the results revealed that Wang Klai Kangwon's Business English freshmen made errors in English SVA sentence structures and verbal inflection forms in their writings for the General English course in two linguistics levels, which are morphological and syntactic. At the morphological level, most students have misapplied verb forms that must agree with their subjects in the present tense. Bunnarong et al. study has left the essential evidence that misusing those inflectional suffixes to the base forms of verbs leads to syntactic errors in English SVA syntax. The results pointed out that the Business English students lack the morphology in word formation as inflectional suffixes of verbs to satisfy the English SVA rules. A lack of proper knowledge of English SVA in spoken form seems more plausible comparing the same problem in the written form, where students have more time to produce the language, but many of them still make those errors in their writing. The obstacles of SVA writing are not encountered only by students in Business English majors; it has committed by the students from other majors at Wanglaikanwon campus and other universities as well.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

As the interview results in 2020, the General English teachers from nine RMUTs in Thailand have given corresponding opinions on the undergraduates' writing in SVA sentences and verb inflection. The RMUT teachers strongly agree that most RMUT students in English majors and others have problems in the English SVA and verb inflection by repeating errors in their writing for the General English course. Lots of RMUT students made mistakes on verb agreement in numbers in the present tense (Nurjanah, 2017) and also misused the inflectional suffixes to add to the base verb forms for indicating the correct tense or aspects in sentence structures. The nine RMUT teachers have a consensual suggestion that the knowledge of morphology as word-formation is necessary for learning and teaching English syntax. The SVA problem seems like a simple error committed by EFL students since people use English mainly for communication in World Englishes. However, the SVA is one of the most essential in academic writing of standard English since the inflectional suffixes of verbs mark tenses, aspects, voice, numbers, and other information Yordchim, S. (2012) that writers need to convey to readers to get their writing purposes.

The Minimalist Program, henceforth MP, is the latest framework in the series of Transformational Generative Grammar proposed by Noam Chomsky in 1995, which provides an optimal answer to the simple computational law of the specific properties characterized by the language system that a child eventually comes to attain in his native language. Hence, MP would be the most appropriate framework to show the native speaker's knowledge of the language. Adger (2002) proposes the MP in the framework of the morpho-syntactic approach that sentences are built by mapping a syntactic structure with a morphological structure according to interface rules. Therefore, this study selected Adger's MP in the morpho-syntactic framework to analyze the data since English SVA patterns in syntax are interpreted via the phi-features, which include person, number, and gender features since it can seek the system of generating English SVA



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

patterns and verb inflection forms according to native English speakers' intuition and indicates how the syntax of SVA structure interfaces to the morphology of verb inflection forms. After the content analysis phase, the models of English SVA patterns and verb inflection forms were applied to teaching materials in the PowerPoint templates using the Communicative Teaching Approach (Richards, 2006) with integrated English learning skills to learn how to generate SVA patterns with a proper verb inflection form in standard English writing of the General English course.

According to the overview mentioned above, most students from nine RMUT of all majors have difficulties in forming English SVA sentences in their standard writings for the General English course as a compulsory course. Several studies have shown that errors in verb inflection lead to the mistake of verb agreement to its subject or the wrong tense or aspect in English writing. Even though online applications can help people correct all errors in writing nowadays, the CLT teaching materials are helpful for RMUT students from all majors to build up the knowledge of morphology and syntax to form correct SVA sentence structures and verb inflection forms without using any applications. Therefore, SVA structures and verb inflection forms were the core of the analysis by collecting the data from the General English textbooks of nine RMUT used in the academic year 2020. And the Business English students who had enrolled in the General English course at the Rajamangala University of Technology, Wang Klai Kangwon Campus (RMUTR) were the samples of this study. Furthermore, applying these CLT teaching materials by integrating four skills helps to motivate the students to create SVA structures in standard English writing for appropriate contexts more accurately.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Research Question

1. What are the systems of constructing English SVA patterns from the General English textbooks of nine RMUT analyzed by the MP in the framework of the morpho-syntactic approach?
2. What are the morphological processes of the verb inflection forms in those SVA patterns from the General English textbooks of nine RMUT?
3. After using the CLT teaching materials, at what level of effect size are the students gaining scores in writing?

Objectives

1. To investigate the system of English SVA patterns and verb inflection forms in General English textbooks of the nine RMUTs by the MP in the framework of the morpho-syntactic approach.
2. To develop the EFL teaching materials of SVA patterns and verb inflection forms and compare the results of the student's ability to construct English SVA and a proper verb inflection form in writing before and after using the CLT teaching materials for the writing lessons of the General English course.
3. To evaluate the student's satisfaction with the CLT teaching materials of English SVA patterns and verb inflection forms in the writing lessons.

Hypotheses

1. On average, the students' post-test scores gained from using the CLT teaching materials is significantly higher than that of the pretest score at $p = 0.05$.
2. On average, after using the CLT teaching materials, the students are satisfied with them (their average opinion score is higher than 3.50/5.00).



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Methodology

Research Design

This study adopted a mixed research method divided into two phases: 1) analyze the contents phase adopting the descriptive research method, and 2) apply the teaching materials phase employing quasi-experimental research with a one-group pretest-posttest design.

Samples and Research Instrument

In the 1st phase, all SVA patterns and verb inflection forms in simple and compound sentence structures were analyzed based on the MP in the framework of the morpho-syntactic approach. However, complex sentence structures are not analyzed because the course description and learning objectives of the General English course aim to develop the students to form basic sentence structures, which are simple and compound.

Four tools used in this phase: 1) five General English textbooks from the General English textbooks of nine RMUTs used in the academic year 2020, 2) Hyperresearch version 4.5.2. is a software for analyzing and classifying the data presented in English SVA patterns and verb inflection forms by the frequency, 3) tree diagrams for displaying the mechanism and internal structures of generating each SVA structure by matching with verb inflection forms in all SVA constructions, and 4) a table of the interface between SVA syntax and morphology of verb inflection forms.

In the 2nd phase, the samples were 63 Business English students out of 74 population determined the sample size by Krejcie & Morgan table (Krejcie & Morgan, 1970) and selected the sampling by simple random sampling with the lottery method. The t-test scores the students gained after using the CLT teaching materials were computed, evaluated for the level of effect size, and interpreted the meaning of effect size to study the value in a practical sense of the research.



The independent variable is the CLT teaching materials that applied the models of SVA patterns and verb inflection forms in the writing lessons for the General English course in the academic year 2022. The dependent variables were 1) the results of comparing the student's writing ability on English SVA and a proper verb inflection form using the CLT teaching materials by the multiple-choice pretest and posttest to show the paired samples t-test results and the level of effect size, and 2) the results of students' satisfaction towards the CLT teaching materials by satisfaction forms with five rating scales (Likert, 1932) presenting each aspect results and overall by mean (\bar{x}), standard deviation (SD.) and level of satisfaction (Srisa-ard & Nilkaew, 1992).

Four tools were constructed in this phase, which evaluated the content validity by three experts and tested the reliability by trying out with 30 pilots: 1) the CLT materials in the PowerPoint with four topics, 2) multiple-choice pretest and posttest in 106 question items, with the Item Objective Congruence (IOC.) = 1, and Cronbach's Alpha = 0.906 a satisfaction questionnaire in 5 rating scales with the IOC. = 1, and the value for Cronbach's Alpha = 0.956.

There were seven steps to applying the teaching materials in the writing lessons in the following.

1. Study the models and system of SVA patterns and verb inflection forms from the content analysis, the CLT approach, the objectives of the General English course, and related research.
2. Distribute the students the multiple-choice pretest before using the CLT teaching materials in the writing lessons for the General English course.
3. Apply the CLT teaching materials by integrating four skills in the writing lessons for the General English course for 3 hours in 5 weeks of the academic year 2022.
4. Hand out the students the posttest after finishing the writing lessons using the CLT teaching materials.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

5. Distribute the satisfaction questionnaires to the students after using the teaching materials reflecting the CLT approach.

6. Analyze and compare the results of students' writings in English SVA structures and verb inflections in the SVA sentences before and after using the CLT teaching materials by computing the paired samples t-test by the computer program. After that, calculate the effect size of practical significance by the online Psychometrica, interpret the magnitude of effect sizes (Sawilowsky, S, 2009) and interpretation of the effect size (Coe, R., 2002: 4).

7. Analyze the results of the student's satisfaction with the teaching materials using the CLT approach by the computer program. The degrees of student satisfaction in three aspects are the contents, design, and benefits of the CLT teaching materials were calculated for each question item by frequency, percentage, and mode, but each aspect and overall by the mean. However, the results presented the students' satisfaction in each aspect and overall interpreted as the level of satisfaction (Srisa-ard & Nilkaew, 1992), but did not go into detail in each question item in this paper.

Results

The 1st Phase

According to the content analysis based on the MP in the framework of the morpho-syntactic approach, it confirms the relationship between English SVA, which is the rule in syntax, and the appropriate verb inflection form, which is the morphological process. That is, the agreement relation between a subject and a verb at the syntactic level requires the proper verb inflection forms from the morphological level.

The results are described in three parts to show the relationship between morphology and syntax when they built the SVA patterns with proper verb



inflection forms in English. The first part shows the results of SVA patterns between a subject and a main verb or an auxiliary verb in the present tense of simple and compound sentences. The second part shows the results of the morphological processes of the verb inflection forms in those SVA patterns. Finally, the last part is the interface system between the syntactic rules and the morphological processes of verb inflection forms in those SVA patterns.

Part 1: Results of English SVA patterns in the simple and compound sentences

The agreement relation between a subject and verb in English syntax is interpreted via the phi-features, which is the agreement feature between a subject and a verb in number and person based on the MP in the framework of the morpho-syntactic approach. The system of the interface between English SVA requirements in syntax and verb inflection formations in morphology constructs SVA patterns with the proper verb forms.

The findings found two English SVA patterns in simple and compound sentences from five General English textbooks: 1) a subject agrees to **the main verb**, shown in Table 1, and 2) a subject agrees to **an auxiliary verb**, shown in Table 2.

There are **two** English SVA patterns when a subject agrees to **the main verb** in simple and compound sentences, which are 1) 3rd person **singular** subject agrees to a **singular** form of the main verb by adding the inflectional suffix -s and the alternatives -es, or -ies to the base verb form or suppletive verb form respectively – a) Bill **likes** Devon., b) He is a really nice guy., and 2) 3rd person **plural** noun and the 3rd person pronoun ‘they’ agree to a **plural** form of the main verb with a zero suffix or the same form of the base verb or suppletive verb form - c) Teachers usually **work** in person., d) They **are** exciting!.

In this study, a tree diagram was used to analyze and present the internal hierarchical structure of SVA patterns. From now, the results in the tree diagrams display the status of Agreement operations and the operation Merge before the

Spell-out and the checked or unchecked status. In the tree diagram, T sets up an Agree relation with the subject in the specifier of vP for the case and with little v itself for tense and phi-feature agreement. The case feature on Tense (T) values the case feature on Determiner Phrase (DP), as well as Agree, holds the phi-features of the DP and the phi-features on T. The Agree relationships transmit the agreement information on the subject DP via T to pronounce on little verb (v). The spell-out rules are sensitive to its featural contents, giving the suffixes [-(-e)s, -ing, -(e)d, -(e)n] or suppletion as appropriate. For example, the SVA sentence structure “Bill likes Devon.” is shown in Figure 1.

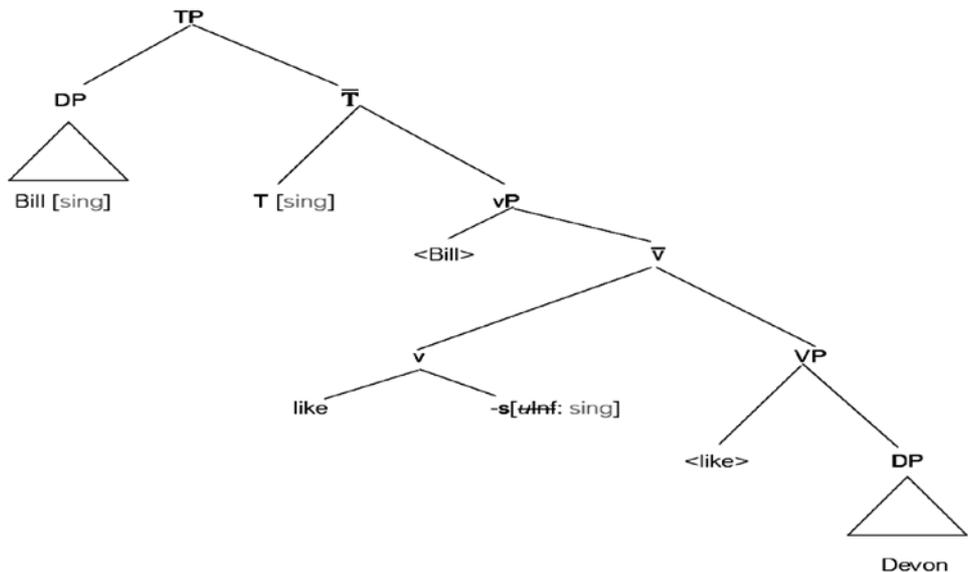


Figure 1: The tree diagram of SVA pattern that the tense is marked on the main verb

The sentence is generated by Merging the features to lexical items according to the requirement in the category selection (c – selection). The lexical item ‘like’ with the V-feature has a c-selectional feature [uN] ‘Devon’: the V-feature has specified the N-category, which can Merge with and bundle



up to be constituents from the root node. The subject-verb-agreement is set up on T, so it bears both Tense and Agree features with a subject. In this case, T bears a present tense feature [pres] and carries uninterpretable phi-features, which need to be checked. The phi-features on T is a singular number feature [sing] which values the singular number feature [sing] from DP ‘Bill’ and then values the inflectional feature [Infl] on the little v. After that, the singular number feature on T[sing] matches with the singular inflectional feature on the little v[Infl: sing], and values it as v[~~infl~~: sing]. Consequently, the matching number features [singular] have occurred between the subject DP [Bill] on the specifier of Tense Projection (TP), the T, and the uninterpretable inflectional feature on the little v [~~infl~~:], valuing it as [~~infl~~: sing] leads to the pronunciation of little v with the suffix –s in the base verb form as in ‘likes’.

The results revealed SVA patterns between a subject and the main verb in the present tense shown in Table 1.

Table 1 Results of English SVA patterns that a subject agrees to the main verb in the present tense

SVA patterns	Examples
1.1.1 SVA patterns that the 3rd person singular subject agrees to a singular form of the main verb in the simple aspect.	a) Bill likes Devon. b) He is a really nice guy.
1.1.2 SVA patterns that the 3rd person plural subject agrees to a plural form of the main verb in the simple aspect.	c) Teachers usually work in person. d) They are exciting!

There are two SVA patterns when a subject agrees to the main verb in the present tense - a singular subject agrees with a singular verb, and a plural subject agrees with a plural verb. The agreement rules in syntax require the form of the verbs to change under the morphological processes.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

The 2nd SVA pattern: Results of SVA patterns that a subject agrees to an auxiliary verb.

The process of tense marking on the auxiliary verb in the SVA patterns is the same as the tense marking on the main verb, as shown in Figure 2. In the sentence “He has ironed the clothes.” the perfect auxiliary ‘have’ is Merged outside of vP. The vP is built up and Merges with the perfective projection [PerfP]. The perf feature on the auxiliary have[Perf] Agrees with uInfl on the little v[uInfl: Perf], and then values it as following: have[Perf] ... v[uInfl:] **valuing as** have[Perf] ... v[uInfl: Perf]. The checked [uInfl, Perf] feature on the little v is spelled out as a participle suffix -ed as in ‘ironed’ according to the Spellout component. After that, the T Merges the PerfP and checks a uInfl feature on the auxiliary ‘have’, and values it as singular [sing]. The subject-verb-agreement is set up on T. So, T bears a present tense feature [pres] and carries uninterpretable phi-features, which need to be checked. In the spelling out component, the auxiliary ‘have’ is spelled out in the suppletive form of the verb have [has]. Consequently, the matching singular number features [sing] occurs between the subject DP on the specifier of TP, the T, and the little v, and the matching inflectional feature between the auxiliary ‘has’ [Perf, uInfl: singular] and the little v [uInfl, Perf] is spelled out as a participle suffix -ed. Lastly, the perfect auxiliary ‘has’ from the PerfP raises to the T in the same way as the main verb raises to the little v according to the Hierarchy of Projections: T > (Neg) > (Perf) > (Prog) > (Pass) > v > V (Adger, 2002: 196).



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
 ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

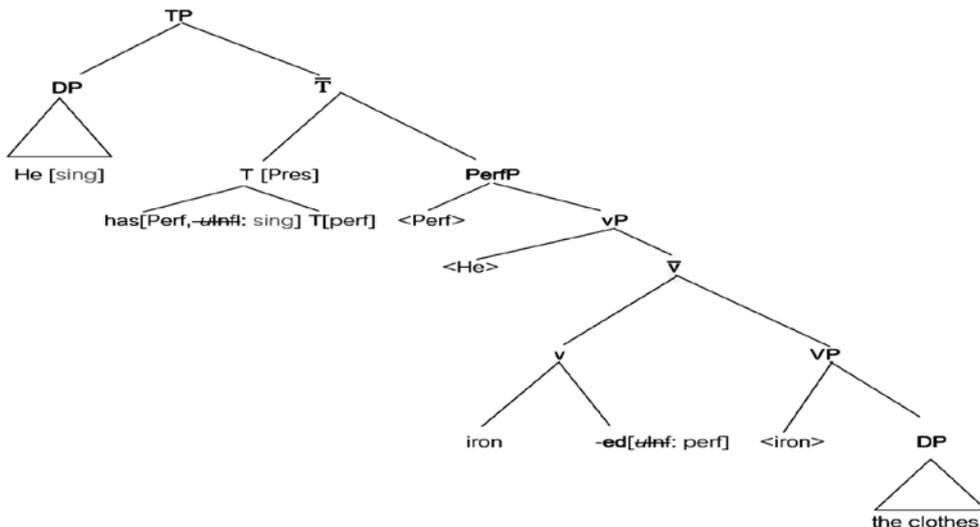


Figure 2: The tree diagram of SVA pattern that the tense is marked on the auxiliary verb

The results of the second part revealed the relationship of SVA patterns between a subject and an auxiliary verb in the present tense. In this case, the tenses mark on the auxiliary verb that the auxiliary verb must agree with the phi-features of a subject shown in Table 2.

Table 2 Results of SVA patterns that a subject agrees to the auxiliary verb in the present tense

English SVA patterns	Examples
1.2.1 SVA patterns that a subject agrees to the auxiliary ‘do’ in the negative or interrogative structure.	
1) SVA patterns that the 3 rd person singular/plural subject agrees to a singular/plural form of the auxiliary verb “do” in the simple aspect.	- He does not have a car. - Does your group agree? - And they do not have enough parking spaces!
1.2.2 SVA patterns that a subject agrees to the auxiliary ‘be’ in the passive construction.	



Table 2 (Cont.)

English SVA patterns	Examples
1) SVA patterns that the 3 rd person singular/plural subject agrees to a singular/plural form of the auxiliary verb 'be' in the passive construction.	- Not everything is made of gold, thought. - They are included in the price!
1.2.3 SVA patterns that a subject agrees to the auxiliary 'be' in the progressive aspect.	
1) SVA patterns that the 3 rd person singular/plural subject agrees to a singular/plural form of the auxiliary verb 'be' in the progressive aspect.	- Sandra is having a party at her house on Saturday. - The other drivers are flashing their lights.
1.2.4 SVA patterns that a subject agrees to the auxiliary 'have' in the perfective aspect.	
1) SVA patterns that the 3 rd person singular/plural subject agrees to a singular form of the auxiliary verb 'have' in the perfective aspect.	- He has ironed the clothes. - They have never been here.
1.2.5 SVA patterns that a subject agrees to the auxiliary 'be' in the be going to construction of the prospective aspect.	
1) SVA patterns with the 3 rd person plural subject agrees to a plural form of the auxiliary 'be' in "going to" construction in the prospective aspect.	- My brother and sister are going to get me at the airport,

According to Table 2, it found five SVA patterns that a subject agrees to the auxiliary verb in the present tense. First, SVA patterns of an auxiliary 'do' in the negative or interrogative structure. Second, SVA patterns of an auxiliary 'be' in the passive construction. Third, SVA patterns of an auxiliary 'be' in the progressive aspect. Fourth, SVA patterns of an auxiliary 'have' in the perfective aspect. And fifth, SVA patterns of an auxiliary 'be' in the 'going to' construction of the prospective aspect. The agreement relationship between a subject and an auxiliary verb requires all auxiliaries in these SVA patterns to bear the morphological process.



Part 2: Results of morphological processes of verb inflection forms in SVA patterns

The results revealed five SVA patterns, in which a subject agrees with the auxiliary verb in the present tense. First, SVA patterns of an auxiliary 'do' in the negative or interrogative structure. Second, SVA patterns of an auxiliary 'be' in the passive construction. Third, SVA patterns of an auxiliary 'be' in the progressive aspect. Fourth, SVA patterns of an auxiliary 'have' in the perfective aspect. And fifth, SVA patterns of an auxiliary 'be' in the 'going to' construction of the prospective aspect. The agreement relationship between a subject and an auxiliary verb requires all auxiliaries in these SVA patterns to bear the morphological process.

Table 3 Results of morphological processes of verb inflection forms in English SVA patterns

Types of verb inflection forms in SVA patterns	Morphological processes	Examples
2.1 Verb inflection forms is constructed by an operation of suffixation in SVA patterns.		
1) The singular verb form of the main verbs or the auxiliary 'do' in the simple aspect	1) suffixes - suffix -s - suffix -es - suffix -ies	- Bill likes Devon. - He goes to film school in Los Angeles. - Jeremy Lin does not like running. - She studies the cognition and communication of dolphins.
2) Present progressive in the progressive and prospective aspect	- suffix [-ing]	- These days, the population is growing so fast. - My brother and sister are going to get me at the airport,...
	- delete e [-ing]	- Sandra is having a party at her house on Saturday.
	- double a final consonant [-ing]	- Dan is getting up at 6:00.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Table 3 (Cont.)

Types of verb inflection forms in SVA patterns	Morphological processes	Examples
	-change ie for y [-ing]	- My battery is dying .
3) Past participle in the perfective and passive construction	1) suffix [-ed]	- A creature from another world is called an alien.
	2) suffix [d]	- Vietnam is located in Southeast Asia.
	3) suffix [(e)n]	- Tea is grown in cooler parts of the island, ...
2.2 Inflectional verb forms that are constructed by suppletion in SVA patterns.		
2.2.1 Suppletive form of the main verbs in SVA patterns		
1) Singular/ Plural form of main verbs forms in the simple aspect	- copular 'be'	- My wife is Japanese. - People are self-aware.
	- verb 'have'	- The team has a game next month. - They have movie and music festivals, too.
2.2.2 Suppletive form of auxiliary verbs in SVA patterns		
1) Singular/ Plural form of auxiliary verbs 'be', 'have' in the passive construction/ progressive/ perfective aspect	- auxiliary 'be'	- A creature from another world is called an alien. - These days, the population is growing so fast. - The other drivers are giving him a warming.
	- auxiliary 'have'	- Susie has asked a lot of questions this semester.
2.2.3 Suppletive form of past participles in SVA patterns		
1) Past participles in the passive construction and perfective aspect		- Both the Olympics and the World Cup are held every four years. - Robbie has not done his homework.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

According to the results in Table 3, **two** types of morphological processes of verb inflection are found in English SVA patterns: suffixation by attaching an inflectional suffix to the base verb form and suppletion by changing a whole base verb form. First, the singular form of the main verbs is formed by adding the suffix *-s*, and the alternative suffix *-es*, and *-ies* to the base verb form and the auxiliary *do* as in ‘**does**’ and suppletive form of the verb ‘*be*’ [*is, are*], and ‘*have*’ [*has*] in the simple present - “**Bill likes** Devon.”, “My wife **is** Japanese.”.

Second, the present progressive verbs are formed by adding the suffix *-ing* to the base verb form that is preceded by the auxiliary ‘*be*’ in the progressive and prospective aspects - “These days, the population **is** growing so fast.”, “My brother and sister **are** going to get me at the airport, ...”.) However, the spelling of the present progressive is changed according to English phonological conditions, in this case, the specific environment: 1) the verb with the final consonant ending *-e* is deleted before adding the suffix *-ing* - Sandra **is having** a party at her house on Saturday., 2) the verb ending by the final consonant with a short vowel must be doubled as in ‘**getting**’ - Dan is **getting** up at 6:00., and 3) the verb ending with the final *-ie* is changed to the consonant *-y* before adding the suffix *-ing* as in ‘**dying**’- “My battery is **dying**.”.

Lastly, the past participles are formed by adding the suffix *-(e)d* and the alternative suffix *-(e)n* to the base verb forms and suppletive verbs that are preceded by the auxiliary ‘*have*’ and ‘*be*’ in the perfective and passive construction - “Susie **has** asked a lot of questions this semester.”, “Satellites **are** used to study the world’s weather.”, “Robbie **has** not done his homework.”.

Part 3: The interface between SVA patterns in syntax and morphological processes of verb inflection forms

The results of the interface between SVA patterns in syntax and verb inflection forms in morphology revealed the systems that construct SVA patterns in syntax that require the proper verb form in morphology. In other words, the



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

agreement relation in syntax between a person, number, or gender of a DP subject and the tense marking on the main verb or the auxiliary verb requires the appropriate verb inflection form in morphology shown in Table 4.

Table 4 The interface system between the syntax rules and the morphological processes of verb inflection forms

Aspect	Syntax										Sentence
	Morphology				Morphology						
	Subject				Verb						
	Nouns/ Pronouns	Types of nouns/ pronouns	Point of view	number	Auxiliary verb	Morphological process	Suffix	Main verb	Morphological process	Suffix	
simple	Cameron Diaz	proper noun	3rd person	singular	-	-	-	be	suppletion	-	Cameron Diaz is an actress.
simple	Your hair	mass noun	3rd person	singular	-	-	-	look	affixation	-s	Your hair looks great!
perfective	Mike	proper noun	3rd person	singular	have	suppletion	-	return	affixation	-ed	Mike has just returned from Brazil.
perfective	Brazil	proper noun	3rd person	singular	have	suppletion	-	win	suppletion	-	Brazil has won the World Cup five times.
simple	Vietnam	proper noun	3rd person	singular	be	suppletion	-	locate	affixation [e deletion]	-d	Vietnam is located in Southeast Asia.
progressive	jellyfish	compound noun	3rd person	plural	be	suppletion	-	disappear	affixation	-ing	Jellyfish are appearing on the beach.



Based on Table 4, the findings revealed only one system of generating English SVA patterns and verb inflection forms in the present tense analyzed by the MP in the morpho-syntactic approach, which is the singular subject agrees with the singular verb, the plural subject agrees with the plural verb according to the Economy and Simplicity Principle. The agreement rules in English syntax require the proper verb inflection forms, which are the word formation processes in morphology; the agreement relation occurs by matching number features [sing/plu] between the subject, the T, and uninterpreted little v. Both morphological and syntactic knowledge based on the simple and economical system of English SVA are essential to enhance the students' abilities to construct English SVA.

The 2nd Phase:

The results of the quasi-experimental research of RMUTR students' writing lessons in the General English course after developing and applying the models of SVA patterns and verb inflection forms to the teaching materials in the PowerPoint based on the CLT Approach are divided into three sections.

The first section shows the contents of English SVA and verb inflection forms in the PowerPoint. The second presents the results of students' ability to perform English SVA and a proper verb inflection form in writing before and after using the CLT teaching materials tested by the multiple-choice pretest and posttest that computed the paired samples t-test and effect size shown in Table 5. The last one is the results of the student's satisfaction with the CLT teaching materials shown in Table 6.

Part 1: The contents of the CLT teaching materials in the PowerPoint

After the content analysis, the system and models of generating English SVA patterns depicted in the PowerPoint templates combined with the knowledge of syntax as English SVA rule and morphology of word information in verb inflection forms for the writing lessons in the General English course. The contents were designed into four topics about English SVA and verb inflection

forms in the present tense. The sample of integrating the knowledge of syntax and morphology to teach how to construct English SVA patterns and verb inflection forms in the context of describing routines and habits is shown in Figure 3.

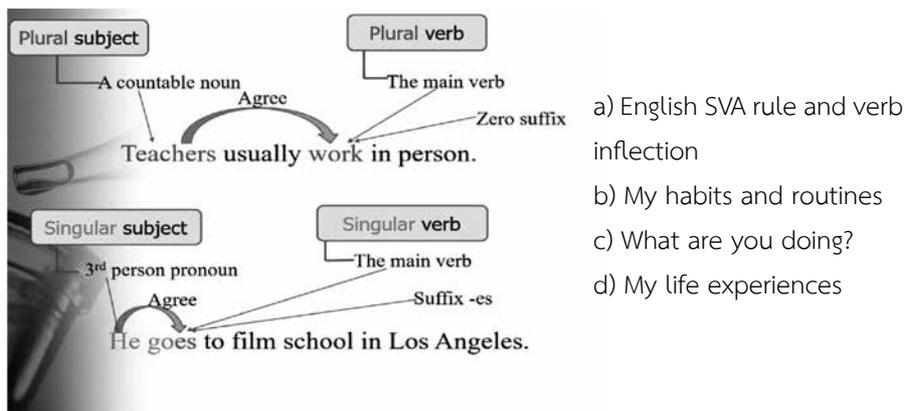


Figure 3 The sample of integrating syntax and morphology in the PowerPoint

Part 2: Results of students' ability to construct English SVA and a proper verb inflection

Table 5 Results of comparing students' writings in English SVA structures and verb inflections

Test	N	Mean	Std. Deviation	Paired differences Mean	Std. Deviation Mean	t	p	Effect size (Cohen's d)
Pretest	63	54.00	16.24	-18.87	1.34	-14.00*	.001	1.18
Posttest	63	72.87	15.70					

According to Table 5, the students got average posttest scores of 72.87 out of 106, which were higher than the pretest scores after using the CLT teaching materials at the average score of 18.87, significantly at $p=0.001$, which accepted hypothesis No.1.



After that, the p-value was calculated for the effect size (Cohen's d) at 1.18 as the huge effect size (Sawilowsky, S, 2009) interpreted that the average students scored higher at 84% after using the CLT teaching materials (Coe, R, 2002).

Part 3: Results of the student's satisfaction with the CLT teaching materials

Table 6 The results of the student's satisfaction with the CLT teaching materials in overall aspects

Satisfaction Evaluation Aspects	Mean \bar{x}	SD.	Level of satisfaction
1. Contents in the CLT teaching materials	4.67	0.36	the highest level
2. Design of the CLT teaching materials	4.79	0.35	the highest level
3. Benefits received from the CLT teaching materials	4.66	0.34	the highest level
Overall	4.71	0.32	the highest level

In Table 6, the results of the students' satisfaction in overall aspects with the CLT teaching materials revealed the average of overall aspects at 4.71 out of 5.00 (SD. = 0.32) is interpreted as the highest level of satisfaction. Average opinion scores of all aspects were evaluated at the highest level of satisfaction that accepted hypothesis No.2.

The design of the teaching materials was satisfied at the highest average score of 4.79, SD.=0.35, and the contents and benefits received from the CLT teaching materials at the average scores of 4.76, SD.=0.36, and 4.66, SD.=0.34 respectively.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

Conclusion and Discussion

1. Two systems have the interface in English SVA patterns, in which the conditions of a subject in syntax require the proper forms of a verb, either a main verb or an auxiliary verb, in morphological processes. The subject's phi-features become a condition to require a proper verb form when it merges with the Agree features of a verb in syntax, resulting in SVA patterns. Therefore, those SVA patterns can be generalized as one simple rule - a singular subject agrees to a singular verb, and a plural subject agrees with a plural verb in the present tense according to the simplicity and economy principle under the MP.

The agreement relation between a subject and its verb in English syntax is interpreted via the phi-features in number [sing/ plu] and person [3, sing/plu] and motivated by semantic and morphological facts. The interface of requirements in English SVA syntax and verb inflection information with the proper verb forms are via the morphological processes of verbs by suffixation and suppletion, and the spell-out rules are sensitive to its featural contents leading to pronouncing the verb inflection form on the little v by suffixation -(e)s, -ies, the zero suffix, -ing, -(e)d, -(e)n or suppletion as appropriate.

2. The results of applying the system and models from the content analysis to the CLT teaching materials in the PowerPoint created four topics for writing lessons by integrating the knowledge of syntax, which is the system of generating English SVA and the morphology as word information of verb inflection in those SVA patterns. Furthermore, the students gained average scores higher at 84% after using those morpho-syntactic teaching materials might be caused by starting to learn the writing lessons by the properties of words - the number of nouns functioning as a subject of a sentence and the morphological process of verb inflections in constructing English SVA sentences since it has only one system in generating English SVA patterns and syntax requires the appropriate verb



form, which concord with (Mukarromah et al., 2019) that the EFL undergraduates faced fewer problems after learning the knowledge of syntax and morphology in writing skill.

3. The highest level of student satisfaction with those CLT teaching materials pointed out that creating teaching materials applying both linguistic levels can encourage students to construct SVA sentences more accurately and serve their needs with the benefits they gained. Finally, designing writing lessons balancing accuracy and fluency activities might stimulate students to learn English for communication rather than memorizing structures, tenses, and aspects, which conformed to (Alhujaylan, 2020) that EFL students can develop their communicative skills as natural learning by integrated-skill in teaching pedagogy.

Suggestions

1. In a further study, English SVA patterns in complex and compound-complex sentences from other English textbooks can be additionally investigated on how English SVA patterns in syntax related to verb inflection forms in morphology to affirm whether the interface system of English SVA, which is economically interpreted by the agreement relation between the phi-features of a subject and a main or an auxiliary verb even in the more complex sentence structures.

2. The knowledge of English syntax and morphology can be applied to EFL pedagogies and in other teaching materials for English writing lessons since sentences are constructed from words (morphology) and motivated by syntactic operations.

3. The problem of confusion in utilizing the proper parts of speech in writing may be an issue that needs to be studied within a morpho-syntactic approach.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

References

- Adger, D. (2002). *Core Syntax: A Minimalist Approach*. (1st Ed.). USA.: Oxford University Press. Retrieved Jan. 1, 2021, from <http://www.pnu.ac.ir/Portal/file/?985502/nahv.pdf%20>
- Alhujaylan, H. (2013). Evaluating the Effectiveness of Integrating Reading and Writing Pedagogy in EFL Setting and Teachers' Perceptions. *English Language Teaching*. 13(5), 177-190.
- Bunnarong, L., Sudmuk, C., Aghaei, B. & Yordchim, S. (2020). Error Analysis on Subject- Verb Agreement and Verbal Inflection in English Syntax of EFL Learners: A Case Study of Wang Klai Kangwon Campus's Freshmen. *Elementary Education Online*, 19(4), 3145-3156.
- Coe, R. (2002). It's the Effect Size, Stupid 1 What effect size is and why it is important. the *British Educational Research Association annual conference, Exeter*, 1214 September, 2002. Retrieved Feb 25, 2021. from <https://f.hubspotusercontent30.net/hubfs/5191137/attachments/ebe/ESguide>
- EF EPI. EF English Proficiency Index. (2020). *A Ranking of 100 Countries and Regions by English Skills*. Retrieved Mar. 25, 2021. from <https://www.ef.co.th/epi/>
- Krejcie, R. V. & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Mukarromah, I., Beratha, S., Artawa, K. & Budiarsa, M. (2019). Designing Morpho-syntax Material for EFL Students: Indonesian Case. *English Language Teaching*. 12(6), 140-145.
- Nurjanah, S. (2017). An Analysis of Subject-Verb Agreement Errors on Students' Writing. *ELT-Echo*. 2(1), 13-25.
- Radin, N. N. M. & Fong, L. L. (2014). *Error Analysis of Subject Verb Agreement in Argumentative Essays*. In Proceedings of the 12th Asia TEFL and 23rd MELTA International Conference, 677-689.



วารสารวิชาการ มหาวิทยาลัยราชภัฏบุรีรัมย์
ปีที่ 15 ฉบับที่ 1 มกราคม - มิถุนายน 2566

- Richards, J. C. (2006). *Communicative Language Teaching Today*. New York, USA: Cambridge University Press.
- Sawilowsky, S. (2009). "New effect size rules of thumb". *Journal of Modern Applied Statistical Methods*. 8(2), 467-474. Retrieved Aug. 1, 2021 from https://en.wikipedia.org/wiki/Effect_size
- Srisaard, B. & Nilkaew, B. (1992). Population Reference when Estimating the Scale Tool on a Sample. *Journal of Educational Measurement Mahasarakham University*, 3(1), 22-25.
- Yordchim, S. (2012). Inflections in English Nouns, Verbs, and Adjectives. *The Journal of the Royal Institute of Thailand*, 4(1), 135-144.