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Judgements of EFL Students on English Stress Placement

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Abstract

The purposes of the study were to investigate the knowledge related to the stress in English at the word level and the sentence level gained by 2nd – 4th year Thai students majoring in English and to compare the scores of the knowledge test obtained by the students with different years of their study and different faculties of their affiliations. The randomly selected sample consisted of 190 participants out of 321 volunteers, the 2nd - 4th year English majors. The research instrument was a Test to Measure the Knowledge of English Stress (TMKES) at the word and sentence levels used to collect the data, and the statistics that were utilized to analyze the data included frequency, mean, standard deviations, and One-Way ANOVA. The findings of the study showed that students who took the test were able to score over half of the total on average. The students' competence in English stress was not significantly different due to their different years of study. However, the students who were affiliated with different faculties had the significantly different competence in English word stress excluding English sentence stress. Additionally, when the scores of both the word stress and the sentence stress were combined, there was a statistically significant difference owing to the distinguishable affiliations.

Keywords: affiliations, class levels, EFL students, English stress, knowledge

Introduction

Incorrect placement of words in a lexical context can hinder learners' word recognition abilities, and mispronunciation may introduce ambiguity, potentially leading to misinterpretation (Sadegna & Jarosz, 2022; Tolibovna, 2023). Existing research has highlighted the challenges faced by learners of English as a Foreign Language (EFL) in accurately producing English word stress (Ahmed, 2019; Khamkhien, 2010;), with various factors influencing pronunciation, including stress placements

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(Cabrera, 2016; Khamkhien, 2010). To attain proficiency in English pronunciation, it is imperative for all English learners to retain knowledge of stress placements at both the word and sentence levels. Consequently, past studies have sought to explore how EFL students retain knowledge of English stress and how to enhance their understanding of stress placement, thereby impacting their pronunciation skills.

Several previous studies have yielded results pertaining to such advancements. For instance, Yanklang (2013) employed an e-learning program to enhance students' proficiency in English stress. The findings revealed that students demonstrated improvement in their pronunciation, as evidenced by the comparison of pretest and posttest scores.

Additionally, Khamkhien (2010) tasked students with acquiring proficiency in English word stress. The results indicated that mastering stress in words with five syllables posed a significant challenge for the students. Nevertheless, this approach proved instrumental in enhancing their overall pronunciation skills.

In addition, the knowledge that learners have gained involves their retention. Theppanya (2014) used mapping activities to teach reading to EFL students. The learners still memorize what they have learned even though the activities passed a few weeks ago. Ghaemi and Rafi (2018) utilized postures to support how to memorize what students have learned. The findings found that the students have memorized what they learned for a long time. Nevertheless, Ahmed (2019) studied about English stress pronounced by the students at a university in Saudi Arabia. The study showed that the students forgot the stress rules. Hence, retention is crucial to store knowledge.

How can the retention of learning and skills be known? According to previous studies, the retention can be known through tests. For instance, Chatupot & Kasuwan (2013) tested the retention of students' knowledge about vocabulary and speaking with tests. Similarly, Saenglor (2017) tested the retention of students' knowledge about adjective words.

However, there is a research gap, as no previous study has explored how well students retain English stress across different English programs in two faculties and one college, specifically at Uttaradit Rajabhat University. Based on their learning plans, the sophomores, juniors, and seniors majoring in English already took a phonetics course when they were freshmen. Furthermore, they had different class levels and faculties, but they took a similar course with English stress. Uttaradit Rajabhat University offers three English programs affiliated with two faculties and one college, namely, the Faculty of Humanities and Social Sciences, the Faculty of Education, and the International College within the university. Each program includes a course in English Phonetics, which encompasses the study of English stress. This course delves into the aspects of human sound production and transcription, as highlighted by scholars such as Rogers (2000) and Katz (2013). In essence, the course is focused on pronunciation. Thus, this study seeks to assess the proficiency of EFL undergraduates—sophomores, juniors, and seniors majoring in English at Uttaradit Rajabhat University. The objective is to examine the extent of their competence in English stress and determine whether variations exist in their proficiency based on different class levels and affiliations with diverse faculties.

Literature Review

1. Notions and Principles of English Stress

The notions and principles of English stress in this study refer to the definitions, degrees of English stress, and stress types.

1.1 Definitions

The English stress is defined by authors. The stress on a syllable of a word is called word stress (Carr, 2013; KatZ, 2013). A long, loud, and high sound is produced for the stress on a word position on which a speaker focuses is called word stress (Carley, Collins, & Mees, 2019). However, Roger (2000) stated that listeners are encouraged to be interested in words or impressed with a word or words in a sentence through the stressed, unstressed, long, and high sounds to express the meanings that the speakers determined is called sentence stress. Therefore, based on the previously mentioned definitions, English stress can be divided into two categories: word stress, and sentence stress.

1.2 Degrees of English Stress

In the stress on either words or sentences, Cruttenden (1986) and Roger (2000) stated that English stress contains four categories of its degrees. The first one is primary stress. A syllable or a word that is pronounced with the greatest force in other syllables in the same word or other words in the same sentence is called primary stress. The stress point is marked with a symbol (') inserted in front of the syllable that is stressed. The second one is secondary stress. The secondary stress is pronounced with the force that is less than is the primary stress. In addition, it can be marked with this symbol (ˌ) inserted in front of the syllable that is stressed. The third one is tertiary stress. This stress is pronounced with the force that is less than is the secondary stress. In addition, it is used for the words with the symbol (ˏ). The last one is an unstressed syllable. This stress is the weakest sound in the categories of the stress.

1.3 Stress Types

There are two types of English stress: word stress and sentence stress (Carley, Collins, & Mees, (2019).

1) Word Stress

In word stress, a syllable or syllables of a word is stressed. According to Carley, Collins, & Mees, (2019); Carr, (2013); Roach, (2009), word stress rules can be summarized as follows.

In terms of the word stress, the syllables of words are stressed based on the number of word syllables. Accordance with the English stress rules (Orion, 2012), if a word contains two syllables, the second syllable is stressed. If a word contains three syllables, any syllable can be stressed. If a word comes with four syllables, the first, the second, or the third syllable is stressed. Furthermore, if a word contains five syllables, the third syllable is stressed, and if a word comes with six syllables, the fourth syllable is stressed.

In addition, the word stress is pronounced based on parts of speech and affixes. In this regard, the last syllable of a verb or an adjective can be stressed. If a word is utilized as a noun with two syllables, its syllable with a long vowel is stressed (Cruttenden, 1986). The affixes: prefixes and suffixes determine the syllable of a word for the stress. Unlike the suffixes, the prefixes do not affect the word stress. However, suffixes involve the word stress. Based on the suffixes, the syllable that is followed by one of these suffixes: -ee, -eer, -ese, -ette, -esque is stressed. For instance, the word, refugee /refjuˈdʒiː/ that is followed the suffix (-ee) must be stressed on the second syllable of the word as a primary stress. Nevertheless, the suffixes that do not influence any position of the stress include -able, -age, -al, -en, -ful,-ing, -like, -less, -ly, -ment, -ness, -ous, -fy, -wise, -y, and -ish. For example, the word, comfort /ˈkʌmfət/ contains two syllables and is stressed on the first syllable. When the suffix (-able) is added to the word, comfort, it becomes comfortable /ˈkʌmfətəbəl/, and the stress is still on the first syllable. In addition to the suffixes, the syllable that is followed by the suffixes: -eous, -graphy, -ial, -ic, -ion, -ious, -ty, and -ive is stressed. To illustrate, the word, perfect perfect /ˈpɜːfekt/, which is followed by the suffix, -ion, becomes a new form, perfection /pəˈfekʃən/.

Furthermore, when a noun combines with another noun, the first word is stressed as a primary stress such as teacup /ˈtiːkʌp/, but when an adjective combines with the word with an -ed suffix, a secondary stress is used for the first stress and a primary stress is used for the second stress such as bad-tempered /ˌbædˈtempəd/. Additionally, if a number and a noun are combined, how to stress is the same as the adjective and -ed suffix combination as in the word, second-class /ˌsekənd ˈklɑːs/. Besides, the same word with the same spelling can be stressed as a speaker determines to be a noun or a verb. For instance, a word, conduct, can be stressed as a noun as in conduct /ˈkɒndʌkt/, whereas it can be stressed as a verb as in conduct /kənˈdʌkt/.

In essence, word stress involves emphasizing a particular syllable within a word. Both speakers and pronunciation ters need to follow specific stress rules, which encompass considerations such as syllables within words, parts of speech, affixes, compound nouns, and numbers.

2) Sentence Stress

The stress on a word or words in a sentence through the loud, high, or long force of sounds is called sentence stress. Words in a sentence that are stressed are called content words, but words in a sentence that are not stressed are called function words. However, the function words can be stressed in the situations that the speaker commands to use English language as he or she needs. The content words include nouns, verbs, adjectives, and adverbs. The function words comprise pronouns, axillary verbs, prepositions, conjunctions, and question words. Additionally, sentence stress can be divided into four types: content word stress, contrastive stress, new information stress, and emphatic stress (Carley, Collins, & Mees, 2019; Kansakar, 1998; Rogers, 2013).

In the content word stress, although a sentence contains several words, a speaker can stress on only content words to express his or her main idea. For example, a sentence, *I will sell my car because I want to go to England*, has five content words: sell, car, want, go, and England. When

the speaker stresses on the words, the sentence stress becomes I will **sell** my **car** because I **want** to **go** to **England**. For this result, regardless of the function words, the main idea is to sell the car to go to England.

In contrastive stress, a speaker compares a piece of content with another piece of content by stressing on the word the meaning of which is different from another word. To illustrate, the sentence, *I think I want that shirt, but I don't want this one* has two words: **that** and **this** with opposite meanings. Thus, the speaker stressed the two words. Besides, whenever a speaker stresses on any word in a sentence as he or she wants, the meaning will be different from the previous meaning. For example, the sentence, *I **went** to China last year*., has the word, **went**, which was stressed because the speaker focused on going. Nevertheless, if the speaker stresses on the word, **China**, he or she focuses on a place. Therefore, the two sentences have different meanings due to the contrastive stress.

In the new information stress, this stress is mostly found in questioning and answering. The answer shows new information. For instance, when a question, *who will give me some money?* is raised, the person's name that is the answer is regarded as the new information.

In emphatic stress, this stress focuses on emotional expressions. It depends on the speaker's force of voice. The speaker's degree of his or her voice can increase emotional meanings. The word in a sentence that is emotionally emphasized will showcase an intensive meaning. For example, *this is the **difficult** homework.* If the word, difficult, is normally stressed, **hard** homework is expressed. However, if the word is emotionally stressed through a strong force of the voice, **so hard** homework is meant.

From the above information, even though the words that are stressed have the same spelling, they are stressed in a different force of the voice.

In a nutshell, sentence stress refers to emphasizing specific words within a sentence to convey the intended meanings as desired by the speaker. This concept can be categorized into four distinct types: content stress, contrastive stress, new information stress, and emphatic stress.

2. Factors Influencing English Stress

In the factors affecting English stress, previous studies investigated the factors that were likely to affect learners' English pronunciation. They included sex, affiliation, and class levels. The results of the previous studies showed that the EFL students' sex (or gender) influenced English pronunciation test scores but affiliation and class levels (Cabrera, 2016; Khamkhien, 2010). However, Panthong and Tumtavitikul (2015) stated that the EFL students' sex and class levels did not affect their English pronunciation, especially word stress. Generally, as the previous studies mentioned above, the affiliation and class levels may or may not influence English pronunciation performed by non-English native speakers or English as a Foreign Language students (EFL).

Research Objectives

This study had three objectives as follows:

1. To investigate the knowledge of English word stress and English sentence stress gained by the EFL undergraduates: sophomores, juniors, and seniors majoring in English,
2. To compare the test scores of English word stress and the English sentence stress obtained by the EFL undergraduates who have different class levels, and
3. To compare the test scores of English word stress and the English sentence stress gained by the EFL undergraduates who have different affiliations/faculties.

Questions of the Study

1. To what extent is the knowledge of English stress gained by the EFL undergraduates: sophomores, juniors, and seniors majoring in English?

2. Do the EFL undergraduates' class levels affect the test scores of English word stress and English sentence stress obtained by the undergraduates: sophomores, juniors, and seniors majoring in English?

3. Do the EFL undergraduates' affiliations affect the test scores of English word stress and English sentence stress obtained by the undergraduates: sophomores, juniors, and seniors majoring in English?

Hypotheses of the Study

1. The test scores of English word stress and English sentence stress earned by the EFL undergraduates: sophomores, juniors, and seniors majoring in English do not have statistically significant differences due to their class levels.

2. The test scores of English word stress and English sentence stress obtained by the EFL undergraduates: sophomores, juniors, and seniors majoring in English do not have statistically significant differences due to their affiliations.

Limitation of the Study

In this study, the limitation comprised the population, sample, variables, and content. The population was drawn from the 321 students at Uttaradit Rajabhat University. They were in different class levels and affiliated with different faculties. Additionally, the students were between the second- and fourth-year undergraduates majoring in English having the status of regular students in the first semester of 2021 and affiliating with the Faculty of Humanities and Social Sciences (HUSO), Faculty of Education (ED), and International College (IC). Furthermore, they had already enrolled in the course related to English phonetics when they were freshmen.

The sample for this study was selected randomly from the population using Taro Yamane's calculation formula (Yamane, 1973). Employing a combination of stratified sampling and simple random sampling methods, the study included a total of 190 participants as determined by the formula. Variables to be studied included the participants' competence in English stress

and their test scores. Competence was an independent variable. The test scores were regarded as dependent variables.

The contents of the study included English stress at the word and sentence levels (word stress and sentence stress). In terms of the word stress, syllables, parts of speech, affixes, and numbers were used to be the content of the word stress. In terms of the sentence stress, four types of sentence stress: content word stress, contrastive stress, new information stress, and emphatic stress were employed to be the content of the sentence stress.

Methodology

The methods in this study included the research design, population and sample, instrument and procedures, data collection, and data analysis.

1. Research Design

This study employed a quantitative research design to investigate differences in test scores among students across various years of study and faculties.

2. Population and Sample

In this study, the 321 English major undergraduates who were sophomores, juniors, and seniors in the first semester of the academic year, 2021 and affiliated with different faculties: Faculty of Humanities and Social sciences, Faculty of Education, and International College at Uttaradit Rajabhat University were selected as the research population because they had taken the course related to phonetics when they were freshmen. Thus, their knowledge or competence in the stress on the syllables of a word or the words in a sentence based on the different affiliations and class levels was determined as the independent variable of the study. Additionally, the test scores were determined as dependent variables.

To draw the sample from the population, the numbers of the sample were calculated with a formula by Yamane (1973) through stratified and simple random sampling techniques. The amount of the sample was 190 comprising 28 participants with 8 sophomores, 6 juniors, and 14 seniors from International College, 56 participants with 18 sophomores, 17 juniors, and 21seniors from Faculty of Humanities and Social Sciences, and 106 participants with 25 sophomores, 40 juniors, and 31 seniors from Faculty of Education.

3. Instrument and Procedures

The instrument employed to collect the data was A Test to Measure the Knowledge of English Stress (TMKES) at the word and sentence levels. It contained three parts: respondent's general information, word stress, and sentence stress. The test was used for this study because it aimed at testing the participants' knowledge of English stress and comparing their test scores. In addition, the instrument was created through steps. First, the researcher collected text and previous studies related to English stress and designed the test based on the purposes of the study. To do so, the pieces of the content related to the stress were categorized into two sorts: English stress at the word level that consisted of the words stressed based on syllables, affixes,

parts of speech, and numbers and English stress at the sentence level that comprised four types of the sentence stress: content word stress, contrastive stress, new information stress, and emphatic stress. The 40 created items for the word stress and 22 items for the sentence stress were placed in the test with multiple choices. Next, three experts assessed the test using the *Index of Item-Objective Congruence (IOC)* tool (Rovinelli, 1976). Based on the experts' recommendations, test items were revised and eliminated to align with IOC values ranging from 0.5 to 1.0. To pilot the test, the test was taken by 30 volunteers, English major students who were affiliated with another university. The used test was calculated to find the difficulty and easiness of the test items (*p*:20-.80) and the discrimination of the items (*r*: .20-1.00) (Kraiwan, 2002). In this regard, the test item that gained lower or higher scores as determined was removed from the test. The revised test finally contained 40 items out of 62 items. Next, the test underwent a pilot phase, administered to 100 volunteer EFL students from a different university. The employed test was evaluated for reliability using the Kuder-Richardson KR-20 method (Kuder & Richardson, 1937). The findings revealed a reliability value of .89 for the test items, establishing the research instrument's validity and reliability. Subsequently, the test was employed for data collection.

4. Data Collection

In this study, the data were collected via the Online Google Form because coronaviruses (covid-19 disease) spread across Thailand. The researcher placed the test items with a consent form in the Form and sent letters to the deans of Faculty of Humanities and Social Sciences, Faculty of Education, and International College to have the permission to collect the data from the selected sample. After the permission, the researcher made an appointment with the participants to send the test link to them via Line Application. Of 190 participants, 187 participants responded to the test. Thus, the data from the 187 participants were prepared for the analysis.

5. Data Analysis

In data analysis, the data were analyzed based on the research objectives, questions, and hypotheses. A computer program was used to analyze the data. The data were divided into three sections: sample's general information, test scores, and score comparison. For the first section, the data were analyzed with frequency, percent, mean, and standard deviation. For the second section, percent, mean, and standard deviation were employed to analyze the data. For the last section, Analysis of Variance (One-way ANOVA) was used to analyze the data. Hence, statistics that were used to analyze the data included the frequency, percent, mean, standard deviation, and One-way ANOVA to obtain the research results.

Results

The findings obtained from the data analysis were related to the test respondents' information, English word stress, English sentence stress, and the test score classification on class levels and affiliations. In addition, the results responded to the research questions and hypotheses.

The participants from two faculties and one college participated in taking the test. However, three participants missed the test (See Table 1).

Table 1

Numbers of the Participants by Affiliations

Affiliations	Participants' Numbers	Numbers of Test Respondents	Percent
Faculty of Humanities and Social Sciences	56	56	29.5
Faculty of Education	106	106	55.8
International College	28	25	13.2
Total	190	187	98.4
The participants who did not take the test		3	1.6
Total		190	100

Table 1 showed that the 187 respondents (98.4%) out of the 190 participants took the test. Three participants (1.6%) who were affiliated with International College missed the test. In addition, the participants who were affiliated with Faculty of Education were at 55.8 percent, Faculty of Humanities and Social Sciences at 29.5 percent, and International College at 13.2 percent, respectively.

At the class levels, three seniors missed the test. Nevertheless, the numbers of the seniors were equal to the numbers of the junior as presented in Table 2.

Table 2

Numbers of the Participants by Class Levels

Class levels	Participants' Numbers	Numbers of Test Respondents	Percent
Sophomore	61	61	32.1
Junior	63	63	33.2
Senior	66	63	33.2
Total	190	187	98.4
The participants who did not take the test		3	1.6
Total		190	100

Besides, Table 2 showed that the numbers of the sophomores (32.1%) were less than were the numbers of juniors and seniors (33.2%). The respondents' proportion was not more different. The results shown in table 3 answered the first research question. To what extent is the knowledge of English stress gained by the EFL undergraduates: sophomores, juniors, and seniors majoring in English?

Table 3

The Scores of English Stress Obtained by EFL Undergraduates

Stress Levels	Numbers of the Test Items	Maximum Scores	Minimum Scores	*M*	*SD*
Word stress	22	22	4	13.81	0.31
Sentence stress	18	15	2	7.12	1.21
Total	40	37	6	20.93	0.52

Table 3 showed that the maximum scores which the test respondents totally obtained were at 37 out of 40 items, while the minimum scores were at six out of 40 items. Furthermore, the mean score of the word stress and sentence stress was totally combined at *M*=20.93 with *SD*=0.52. Separately, based on the word stress, the test respondents' maximum scores were at 22 out of 22 items, while the minimum scores were at four out of 22 items. The mean score of the word stress was 13.81 (*SD*=0.31). In terms of the sentence stress, the test respondents' maximum scores were at 15 out of 18 items, while the minimum scores were at two out of 18 items. The mean score of the sentence stress was 7.12 (*SD*=1.21).

Tables 4 and 5 showed the results answering the second research question. Do the EFL undergraduates' class levels affect their test scores of English word stress and English sentence stress?

Table 4

The Mean and Standard Deviation of the Test Scores Classified by Class Levels

Stress Levels	Class Levels	Numbers	*M*	*SD*
Word	Sophomore	61	13.50	4.01
	Junior	63	14.71	4.46
	Senior	63	13.21	4.40
	Total	187	13.81	4.32
Sentence	Sophomore	61	7.52	2.94
	Junior	63	7.00	3.08
	Senior	63	6.87	2.96
	Total	187	7.12	3.00
Word and Sentence	Sophomore	61	21.08	5.81
	Junior	63	21.71	5.69
	Senior	63	21.05	5.91
	Total	187	21.05	5.80

Table 4 indicated that at the word stress level the juniors gained the highest scores at *M*=14.71, *SD*=4.46; sophomores at *M*=13.50, *SD*=4.01; and seniors at *M*=13.21, *SD*=4.40, respectively. At the sentence level, the sophomores obtained the highest scores at *M*=7.52, *SD*=2.94; the juniors at *M*=7.00, *SD*=3.08; and the seniors at *M*=6.87, *SD*=2.96, respectively. Additionally,

when the scores of the word stress combined with the scores of the sentence stress, the juniors obtained the highest scores at *M*=21.71, *SD*=5.69; the sophomores at *M*=21.08, *SD*=5.81; the seniors at *M*=21.05, *SD*=5.91.

The results shown in Table 5 proved the first hypothesis. The test scores of English word stress and English sentence stress obtained by the EFL undergraduates: sophomores, juniors, and seniors do not have statistically significant differences due to their class levels (See Table 5).

Table 5

Class Level Score Contrast

Stress Levels	Sum of Squares	*df*	Mean Square	*F*	Sig.*
Word	80.029	2	40.014	2.161	0.118
Sentence	14.723	2	7.361	0.820	0.442
Word and sentence	57.415	2	28.707	0.53	0.428

*$p \leq .05$

Table 5 showed that test respondents with varying class levels did not exhibit distinct test scores at each stress level. This is evidenced by the p-values for word stress, sentence stress, and their combination, all of which exceeded .05 ($p > .05$). Therefore, the results proved the first hypothesis that the test scores of English word stress and English sentence stress obtained by the EFL undergraduates: sophomores, juniors, and seniors did not have any statistically significant difference owing to their class levels.

Tables 6, 7, and 8 showed the results answering the third research question. Do the EFL undergraduates' affiliations affect their test scores of English word stress and English sentence stress? In addition, the results also proved the second hypothesis. The test scores of English word stress and English sentence stress obtained by the EFL undergraduates: sophomores, juniors, and seniors majoring in English do not have statistically significant differences due to their affiliations.

Table 6

The Mean and Standard Deviation of the Test Scores Classified by the Students' Affiliations

Stress Levels	Affiliations	Numbers	*M*	*SD*
Word	Faculty of Humanities and Social Sciences	56	15.68	5.33
	Faculty of Education	105	13.07	3.74
	International College	25	12.80	2.69
	Total	187	13.81	4.33

Table 6 (Continued)

Stress Levels	Affiliations	Numbers	*M*	*SD*
Sentence	Faculty of Humanities and Social Sciences	56	7.88	3.20
	Faculty of Education	105	6.77	2.82
	International College	25	6.96	3.02
	Total	187	7.13	2.99
Word and sentence	Faculty of Humanities and Social Sciences	56	23.60	6.88
	Faculty of Education	105	20.00	4.92
	International College	25	19.76	4.95
	Total	187	21.05	5.80

Table 6 showed that for the word stress the students who were affiliated with Faculty of Humanities and Social Sciences obtained the score (*M*=15.68, *SD*=5.33), with Faculty of Education gained the score (*M*=13.07, *SD*=3.74), and with International College had the score (*M*=12.80, *SD*=2.69), respectively. For the sentence stress, the students who were affiliated with Faculty of Humanities and Social Sciences obtained the score (*M*=7.88, *SD*=3.20), with International College gained the score (*M*=6.96, *SD*=3.02), and with Faculty of Education had the score (*M*=6.77, *SD*=2.82). For the word and sentence stress combination, the students from Faculty of Humanities and Social Sciences obtained the score (*M*=23.60, *SD*=6.88), from Faculty of Education (*M*=20.00, *SD*=4.92), and from International College (*M*=19.76, *SD*=4.95), respectively.

Additionally, One-way ANOVA was used to analyze the data to find whether the students who were affiliated with different faculties gained different scores or not (See Table 7).

Table 7

Affiliation Score Contrast

Stress levels	Sum of Squares	*df*	Mean Square	*F*	Sig.
Word	279.697	2	139.849	8.024	0.000*
Sentence	45.269	2	22.634	2.568	0.079
Word and Sentence	522.558	2	261.279	8.389	0.000*

*$p \leq .05$

Table 7 indicated that the students' different affiliations affected their test scores of the word stress. Their scores were at the statistically significant difference in the word stress with the f-test=8.024
($p < .05$). However, the students' different affiliations did not affect their test scores of the sentence stress with the f-test=2.568 ($p > .05$). Nevertheless, when the scores of the word and sentence stress were combined, they were at the statistically significant difference with the f-test= 8.389 ($p < .05$). To compare the scores in pairs, Post Hoc (LSD) was employed (See Table 8).

Table 8

The Test Score Comparison Classified by Affiliations Calculated through Post Hoc Test (LSD)

Dependent Variable	(I) Faculties	(J) Faculties	Mean Difference (I-J)	Std. Error	Sig.
Word	HUSO*	ED*	2.61253*	0.68966	0.000*
		IC*	2.87857*	1.00416	0.005*
	ED*	IC	0.26604	0.92819	0.775
Sentence	HUSO*	ED*	1.10142*	0.49043	0.026*
		IC	0.91500	0.71408	0.202
	ED*	IC	-0.18642	0.66006	0.778
Word and sentence	HUSO*	ED*	3.59771*	0.92196	0.000*
		IC*	3.84714*	1.34240	0.005*
	ED*	IC	0.24943	1.24084	0.841

*$p \leq .05$

Table 8 showed statistically significant differences of the test scores based on the affiliations in pairs. In terms of the statistically significant differences in the test scores, at the word stress level, HUSO students' scores were different from ED and IC students' scores ($p < .05$). However, ED students' scores were not significantly different from IC students' scores with the ($p > .05$). At the sentence stress level, HUSO students' scores were different from ED students' scores ($p < .05$). However, HUSO students' scores were not different from IC students' scores ($p > .05$). In addition, ED students' scores were not different from IC students' scores ($p > .05$). When both scores were combined, the findings were found that HUSO students' scores were different from ED and IC students' scores ($p < .05$). Nevertheless, ED students' scores were not different from IC students' scores ($p > .05$).

Discussion

The findings from the present study address the research questions and align with previous studies. The subsequent discussion is organized according to the research questions and is framed by the outcomes of this study.

Research question 1 explores the proficiency of EFL undergraduates—sophomores, juniors, and seniors majoring in English—in their knowledge of English stress. The findings indicate that students were able to achieve scores exceeding half of the overall scores at the two stress levels. Nevertheless, at the sentence level, students did not demonstrate strong performance, evidenced by their lowest scores. It is conceivable that the quantity of words may influence stress placement judgments, suggesting a potential correlation with students having lower proficiency in pronunciation skills. Accordingly, this suggests that the respective faculties have implemented high-quality curricula. The results have practical implications for the improvement of English program curricula through informed revisions.

Research question 2 inquiries about the potential impact of class levels on the test scores of EFL undergraduates in English word stress and English sentence stress. The results revealed that although the students had different class levels, they did not have any significantly different competence or knowledge of the English stress. This was in concord with Panthong and Tumtavitikul (2015), who studied whether class levels affect English stress. The findings found that the class levels did not influence the English stress.

Research question 3 investigates whether the affiliations of EFL undergraduates have an influence on their test scores in English word stress and English sentence stress. The findings revealed significant differences in the competence or knowledge of English stress among students affiliated with different faculties. This contrasts with the findings of Khamkhien (2010), who investigated whether test takers' affiliations had an impact on test scores and found that affiliations did not influence the test scores.

The findings of this study carry practical implications for the improvement of teaching and learning English stress. Specifically, the ability to administer a common test across different class levels can enhance the overall effectiveness of English language education. For English programs, these results can inform curriculum revisions by guiding decisions on additions or removals from existing curricula. Additionally, universities can benefit by recognizing the potential variations in knowledge acquisition among students with different affiliations, even when enrolled in similar courses. On a broader scale, these insights are valuable for national-level policymaking, as the government can use this study to formulate policies that enhance the learning of English as a foreign language. In terms of students retaining the knowledge acquired about English stress rules from their Phonetics class, the outcomes align with Ahmed's (2019) study, suggesting that students tend to forget this knowledge, as evidenced by their overall scores reaching a moderate level and particularly low scores on words with five syllables. Hence, it is advisable for educators to develop activities and tasks, along with utilizing effective computer-assisted language learning (Topal, 2022) or online resources such as YouGlish at www.youglish.com (Jarosz & Sadegna, 2022), to improve retention (Ghaemi & Rafi, 2018; Theppanya, 2014). The emphasis should be on retaining knowledge of stress because incorrect pronunciation by a speaker can lead to misinterpretation of messages. In addition, it is crucial to instruct EFL students at all levels, including children, in the accurate and standard pronunciation of English to avoid improper or unclear articulation (Tolibovna, 2023).

Finally, the observed statistically significant difference in scores between HUSO students and those from ED and IC students ($p < .05$) suggests that affiliation plays a role in the English stress judgment of EFL learners with a Thai background. This finding aligns with the results of Khamkhien (2010) and Cabrera (2016) but contradicts the findings of Panthong and Tumtavitikul (2015). Conversely, the absence of statistically significant differences between the scores of ED students and IC students ($p > .05$) implies that affiliation does not impact stress judgments for these students. Therefore, it is recommended that additional factors such as gender, English proficiency, and motivation be explored in future investigations.

Conclusion

In conclusion, this study was conducted to address a gap in previous research, as no similar study had been undertaken before. Moreover, with established reliability and validity, the study successfully met its objectives by providing insights into how EFL undergraduates—sophomores, juniors, and seniors majoring in English—have acquired knowledge of English stress over an extended period. The study also examined whether differences in students' knowledge or competence in English stress were associated with class levels and affiliations. The results indicate that the proficiency or understanding of English stress among students in all groups is of a moderate level. Notably, class levels do not seem to impact the retention of knowledge about English stress, while affiliations do play a role, although not consistently across all groups. Hence, the impact of affiliations requires further investigation.

Recommendations

The recommendations arising from this study suggest that future research should explore the potential influence of learners' gender on English stress. Additionally, there is a need for further investigation into the retention of learners' knowledge. Lastly, curriculum designers can apply the insights gained from this study to enhance pedagogical approaches, and researchers conducting studies in a similar context can consider adapting the TMKES instrument employed in this study for their own research endeavors. Additionally, exploring the development of computer-based learning tools or leveraging existing online resources for pronunciation instruction, both within and outside regular classes, should be considered.

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