

# Open-Source Tools in ESL Learning: A Quantitative Study

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## Abstract

This research paper delves into the utilization of open-source tool, specifically LearningApps.org, with the purpose of improving the teaching of tenses to students who are learning English as a Second Language (ESL). The purpose of this study is to investigate the influence that LearningApps.org has on the level of interest and participation that students have in the process of learning the past tense (PT) and future tense (FT) of the English language. We used a quantitative technique, and we had 94 English as a Second Language (ESL) students between the ages of 17 and 20 who were fluent in three distinct native languages. The paper is organized into three primary sections: 1) Assessing learners' interest in utilizing LearningApps.org, 2) Examining the benefits of LearningApps.org tools for ESL students, and 3) Analysing ESL students' performance using LearningApps.org in PT and FT exercises. This study's findings have significance for online learning tools, English as a Second Language (ESL) learners, educators, and lesson organisers because they provide insights into the needs and engagement variables that are relevant to both PT and FT in ESL learning. Another channel for further interdisciplinary study that aims to improve topic engagement from the point of view of learners is opened up as a result of these findings.

**Keywords:** Language Learning, ESL Learning, Engineering students, Grammar Tenses, LearningApps.org, Quantitative Study.

## Introduction

In Indonesian schools, students typically begin their study of foreign languages with an introduction to the English language. It has even been elevated to the status of a topic that will be covered on the National Exam. In order for pupils to become proficient in English, they need to study the many aspects of the language, including phonetics, morphology, lexical, syntactic, and contextual knowledge. In addition to grammatical, semantic, and pragmatic considerations (1). English has been taught in schools from kindergarten all the way up to the university level, yet despite this, there are still a great number of individuals who have trouble in understanding English. Listening, speaking, reading, and writing are the four fundamental areas of English that students must become proficient in during their time spent for learning the language (2). Despite the debates about whether grammar instruction in a foreign language should be removed or included the importance of grammar as an

element necessary to acquire the language is essential, particularly for students of Indonesian (3). One of the hardest things to learn is grammar. elements of a second language to acquire; thus, In the field of language teaching, it is impossible to ignore or gloss over this feature of the language. Although even though mastering grammar is one of the most challenging aspects of learning a foreign language, it is still crucial to do so. (4, 5). According to Cakir and Abdulmalik, "Grammar is the backbone of any language," It relates to the belief that if one is not familiar with the grammatical standards of a language, then he will not be able to communicate effectively in that language (6, 7).

Thornbury referred to grammar as a "sentence-making machine" (8). Language is the most significant way of communication for humans since it enables them to convey their ideas, senses, thoughts, knowledge, and so on. Human beings are responsible for the development of the communication instrument known as language,

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which consists of sound and symbols (9). In the study of Rizka (10), the Because language is an artefact of human culture, its existence in a society cannot be separated from culture. This makes the presence of language in society inseparable from culture. Humans can communicate with one another through the production of sounds or the construction of words, both of which are representations of the ideas and feelings that humans have. If a person can utilise the language correctly, they will be able to attain the goal of having good communication with others. If this is not the case, and the language that they are using is not understood by the listeners and the speakers, then the communication that is being utilised cannot reach its intended destination. It will take place during the learning and teaching processes; but, in the absence of a language, this process cannot be completed effectively. Even if a language is something that is produced by culture, the process of acquiring a language will fail if it is not supported by appealing media. According to Syahri (11), Students in primary and secondary education institutions are introduced to the English language as their first experience with a language that is not their native tongue. On the other hand, studying English in line with the curriculum that was implemented in 2013 is based on a scientific method that features characteristics that are centred on the process of studying. These traits include cognitive processes, giving students opportunities to grow, discovering knowledge through the learning process, learning from a variety of sources, promoting students' ability to learn sustainably, creating value, and putting into practise the idea that teachers, students, and schools are a unity in learning (12).

At present, a significant number of pupils exhibit a pessimistic attitude towards writing in English and struggle to write effective compositions. Students often merely utilise a few words to jot down few short statements that are pertinent to the content that has been provided to them. Their capacity for written expression has to be enhanced. It is not unusual to find kids' writing to have a large number of errors, as this is a common form of student expression (13). When it comes to learning a second language, grammatical instruction is still the most

prevalent topic of research, both experimentally and practically (14).

According to Tomakin (15), an essential component of English grammar is tense. Shiny (16) asserts that the use of tense in sentence structure aids in describing the setting of an event or a condition at a certain moment in time. A sentence is considered to be grammatically accurate if it uses the proper tenses at the appropriate times. Students in Indonesia, and particularly those attending Tompotika Luwuk University, have a hard time grasping the concept of tense. Researchers tried a great deal of different methods in order to tackle the tenses problem (17). According to the findings of Jubhari (18), the implementation of the substitution drill approach into the learning process enables students to effectively master tenses.

When employing the PT, the circumstance is set before the present. The phrase "PT" refers to any event or circumstance that occurred in the time that has passed since the present (19). According to Comrie (20), "PT only locates the situation in the past without saying anything about whether the situation continues to past or into future, although there is often a conversational implicature that it does not continue to or beyond the present". In a basic sense, the PT encompasses everything that happened before the present (the time of utterance). A great number of studies have pointed out the striking similarity between the perfective aspect and the PT (21-25).

According to Bybee et al. (21) and Comrie (20), using the FT to allude to an occurrence that will take place after the time of speech is acceptable. The future involves anticipation, wishful thinking, deliberate planning, and willing action (21). The term "future" refers to nothing more than an educated guess regarding events that might or might not take place in the future. Because of this, referring to the future in the PT is tricky. In contrast to modal formulations that allude to other universes, the so-called FT in English gives a definite prognosis about some future condition of events. according to Comrie. According to the norms of English grammar, the FT exists in the language (20). The auxiliary verb "will" is the form that is used to denote FT in traditional grammar. It's possible that the auxiliary word "will" has other

meanings in English outside those associated with the FT.

### Literature Review

It has been hypothesized, in light of the recent surge in interest in the acquisition of multiple languages, that the complete linguistic repertoire is engaged throughout the process of learning a new language and the possibility that this may play a role in transfer learning (26,27). Studies on language acquisition that focus on tense-aspect marking contribute to a better comprehension of the workings of the system that underlies the formation of meaning associations in acquired languages (28). When it comes to acquiring tense-aspect morphology, learners are observed to be attentive to the verbs' inherent lexical features in both the first and second languages. The Aspect Hypothesis (29,30) is comprised of four generalizations on the learning of tense-aspect marking by students of a language.

According to Lyons see Runtuwene (31), one of the most significant challenges that students confront is mastering the English language, specific in grammar. According to Lyons, grammar is a form of words that are embedded in the very nature of the language and the way they are joined in phrases, clauses, and sentences. Alternatively, one might say that grammar is a set of rules that govern how to combine words into sentences. When writing paragraphs in the PT, many students who are learning English make blunders. They were unaware of the pattern from the simple PT, and they were unable to differentiate between the first and second form of the verb. These were only two of the numerous factors that led to the blunder.

According to Tanjung (32), an action or activity that was carried out by a subject in the past is in the Simple PT. Simple PT is characterized by the use of past verbs (verb 2) and the use of past form phrases immediately after those verbs. The phrase is made up of the words "yesterday," "last," and "ago."

At this time, studying grammar has been done using web-based technology, which is particularly useful given that tense is a highly significant of grammar. Several online tools for studying tenses are available, including English tenses and Verbs and Tenses; nevertheless, the educational designs seem to ignore

the motivational factors for the learner (33). More in detail, the most recent version of English Tense, which is 4.2, is a web-based program that makes teaching English tense simple. publisher: dream it. 2. Best tenses and Verbs Tutor is not only a vocabulary and grammatical structure learning software for the Android platform, but it also teaches several other languages' tenses and vocabulary. The Tutor app may be downloaded from the Google Play store for free. The program was most recently updated to version 1.33, which was developed by Team Soft TestLab. In addition, research that studied the use of multimedia in the design of instructional materials for a variety of topics found that most instructional designs did not take a motivating approach into consideration when constructing them (34-37).

Chen et al. (38) investigated how people learning a second language view the potential of Google Assistant (GA) at various skill levels in relation to ELLs' perspectives of open-source tools. For one hour, 29 college students studying English as a second language were instructed to utilize a variety of voice commands with GA as part of the research. According to the participants, they like engaging with GA and thought it was a motivating tool for learning a language, especially for speaking and listening abilities. They also observed that GA had a natural and understandable pronunciation. Higher-level learners were able to obtain improved mutual comprehensibility using GA, whereas lower-level learners faced more difficulties because of mispronunciations. The study gives recommendations for future research areas and pedagogical techniques in addition to providing insights into the possibilities of IPA-assisted L2 learning.

Tao and Zou (39) investigated how Chinese students see Kahoot! in the context of classroom instruction in their study. Finding out how games work and whether they can aid in learning was the aim. Eighty first-year foreign university students from China's mainland participated in the study and answered an anonymous questionnaire. Additionally, thirteen students were given the chance to take part in an in-person interview. According to the findings, Kahoot was thought of as a useful game-based tool that might raise student motivation, engagement,

effectiveness, and interaction during class. According to this research, teachers can help students with their EFL learning by using Kahoot. The results of this study have significance for teaching in other contexts where students could adopt a more passive learning style, in addition to the Chinese higher education system.

#### Research Objectives

The objective of the study is to learn more about the open source for ESL students to grasp the English tenses:

- To enhance the knowledge and understanding of Past and FTs in English.
- To discover the interest in LearningApps.org for ESL learners.
- To identify the feasibility of grasping tenses through LearningApps.org.

#### Research Questions

To direct this study, the following research questions have been developed:

- Do learners gain knowledge and understand tenses?
- Will ESL learners find interest in LearningApps.org?
- How feasible will LearningApps.org help ESL learners?

In addition to the ability to strategically organize, monitor, and regulate one's own information acquisition, metacognition encompasses the cognitive capacity for reflective thought regarding the learning process (40). The term usually refers to two simultaneous processes: managing one's own process of learning and putting strategies into place to improve it. Two separate components may be distinguished under the category of metacognition: The idea of metacognition, according to Flavell (41), refers to a person's comprehension and knowledge of their own cognitive processes. Understanding a person's own strengths and weaknesses that affect their performance (declarative knowledge), the knowledge needed to successfully complete a task (procedural knowledge), and the knowledge related to using strategies to gather information (conditional knowledge) are all included in the processes. According to Flavell (41), learners' ability to exert control over their learning processes is known as the metacognition regulation. This entails planning,

which is the process of carefully choosing appropriate tactics and allocating resources with the intention of learning. It also includes monitoring, which is the process of evaluating one's own capacity to grasp and meet the intended performance objectives of a particular work. Finally, it entails assessing task performance critically and the effectiveness of the learning process in general. This study employs metacognitive theory. Teng (40) said that forecasting writing proficiency requires a unique understanding of metacognition, and that prediction is far more accurate than one based only on metacognition knowledge.

## Methodology

A quantitative approach has been taken in this investigation. It was essential to employ a quantitative method in order to collect precise and countable data through the use of numerical data. As a result, the quantitative method was utilized in this study to determine the percentages that are necessary to support the study findings. Cross-tabulations and percentage tables are the most fundamental forms of quantitative analysis as mentioned by Treiman (37). Data from the pre-and post-tests of the Control Group (CG) and Experimental Group (EG) were collected, and after statistical analysis, it was determined which aspect of the tenses was the most difficult for both the CT and ET. The learners were given multiple-choice questions in both PT and FT. The learners were facing the test through LearningApps.org. The CG was not instructed regarding the application on both pre-test and post-test and the EG was taught about the application with the hint tool for identifying the exact tense during post-tense to fill in the answers. Regarding sample and sample size, 94 ESL learners participated in this study as the respondents, who were enrolled as Bachelor of Technology. Traditional purposive sampling was used in the study. From the whole population, a random sample was selected. These people were selected in large part since they have expressed interest in learning ESL. Only a handful of the participants had fluency in the English language, and most of the respondents had less fluency. The participants in this study were not familiar with the learning methods that were utilized in this investigation. The participants had no

previous knowledge of the technique in its entirety. The ages of the students ranged from 17 to 20, with the vast majority falling between the ages of 18 and 19. Figure 1 shows the number of male and female participants and Figure 2 shows the participant's native language.

### Conceptual Framework

LearningApp.Org is an open-source software, it is incredibly easy to use for both teachers and students. Instructors have the freedom to design their own classes and practice areas according to their

preferences, using either games or traditional methods. And, there are ready-made tasks instructors can choose one among them also. This Open-source Software has lots of different task types. It is also possible to use a variety of sources to create tasks with video, audio, text, and pictures. By incorporating games into practice sessions, instructors may engage students in both the game itself and the learning process, thus enhancing their ability to learn. Open-source technologies will enhance the language development of ESL learners.

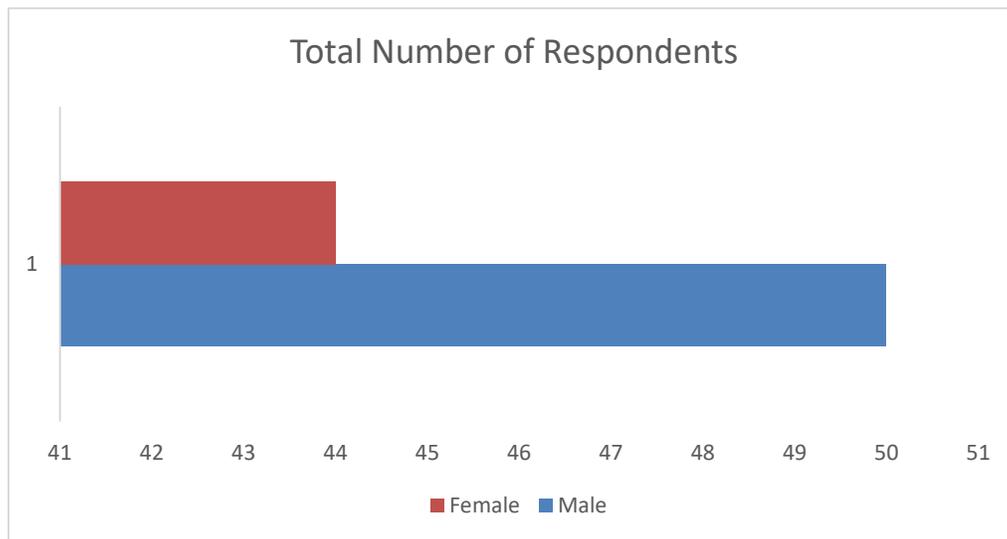


Figure 1: Number of respondents

### Observation

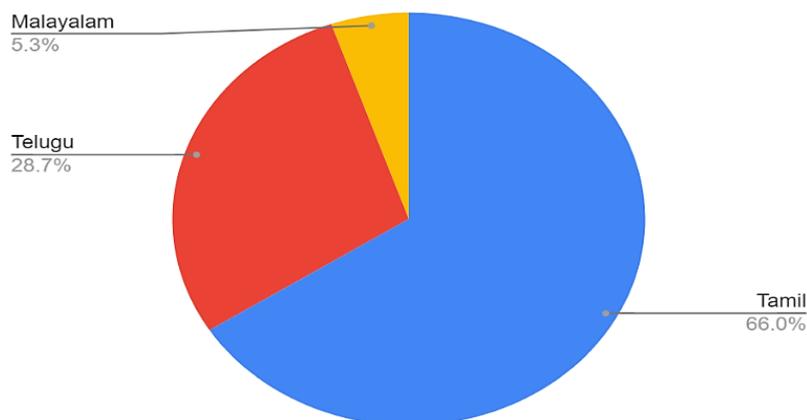
In this study, the fundamental purposive sampling approach was used. A random population was chosen. A sample was taken at random from the entire population of Bachelor of Technology. Learners were given the task of picking the correct PT and FT options to fill in the blanks to achieve the purpose of the study. The researcher collected data for the pre-test and post-test of both the CG and EG by a self-created question that was distributed using LearningApps.org. These data were then analysed to arrive at a legitimate conclusion about the study. This study had a total of 94 individuals, 52 of whom were female and 42 of whom were male.

Respondents in this research spoke various languages, including their mother tongues: 62 (66%) students speak their mother tongue as Telugu,

followed by 27 (28.7%) students speaking their mother tongue as Tamil, and 5 (5.3%) students speaking their mother tongue as Malayalam.

### Research Design and Procedure

The respondents were given a brief explanation of the study's purpose by the researcher. Then the researcher concentrated on the task of beginning with past-tense and future-tense for learners as a pre-test for both CG and EG. In the CG, learningApp.org was not provided and for the EG, LearningApps.org was provided for performing the task. The results were drafted for the pre-test. Then the researcher framed another self-made question in LearningApps.org for the post-test and asked the respondents to select the appropriate PT and FT to fill in the sentence.



**Figure 2:** Participant's mother tongue respectively

Here in the post-test respondents from the CT were given LearningApps.org to answer the given question without providing any instructions. However, the EG researcher gave some tips for using the hint icon to get clues to find the correct answer from the given options. In the pre-test participants from CG did not show much interest in writing the test. However, they had some eagerness to attempt the test using LearningApps.org in the post-test as they could play games in the meantime. Later the results were drafted from the post-test and the data analysis was driven out. The results from the pre-test and post-test are taken from the LearningApps.org for EG. For CG the post-test results are derived from LearningApps.org. The results of CG and EG are fed in Excel and the averages are derived. Figure3 shows the outline of the research design.

### Results

The results of the study have been compiled here with the use of Excel to show the progress made during the intervention. The results of the test that the students.

Figure4 shows the past tense results of the control and experimental group in the pre-test. Student-paced instruction in LearningApps.org led to an improvement in learners' pragmatic proficiency in the PT for the EG. Graph 3. displays the pre-test result of the PT of both the CG and EG. Graph 3. Demonstrates that the results of the CT are observed worse than the results of the EG in the Pre-test of the PT by the ESL respondents. Thus, the improvement was caused due to the instructions provided to the EG respondents.

**Table 1:** Results of Pre-Test PT of the control and the EG.

S. No	CT	EG
1	72	88
2	60	80
3	81	79
4	57	73
5	66	90
6	43	63
7	22	78
8	15	53
9	30	58
10	59	77
	50.5	73.9

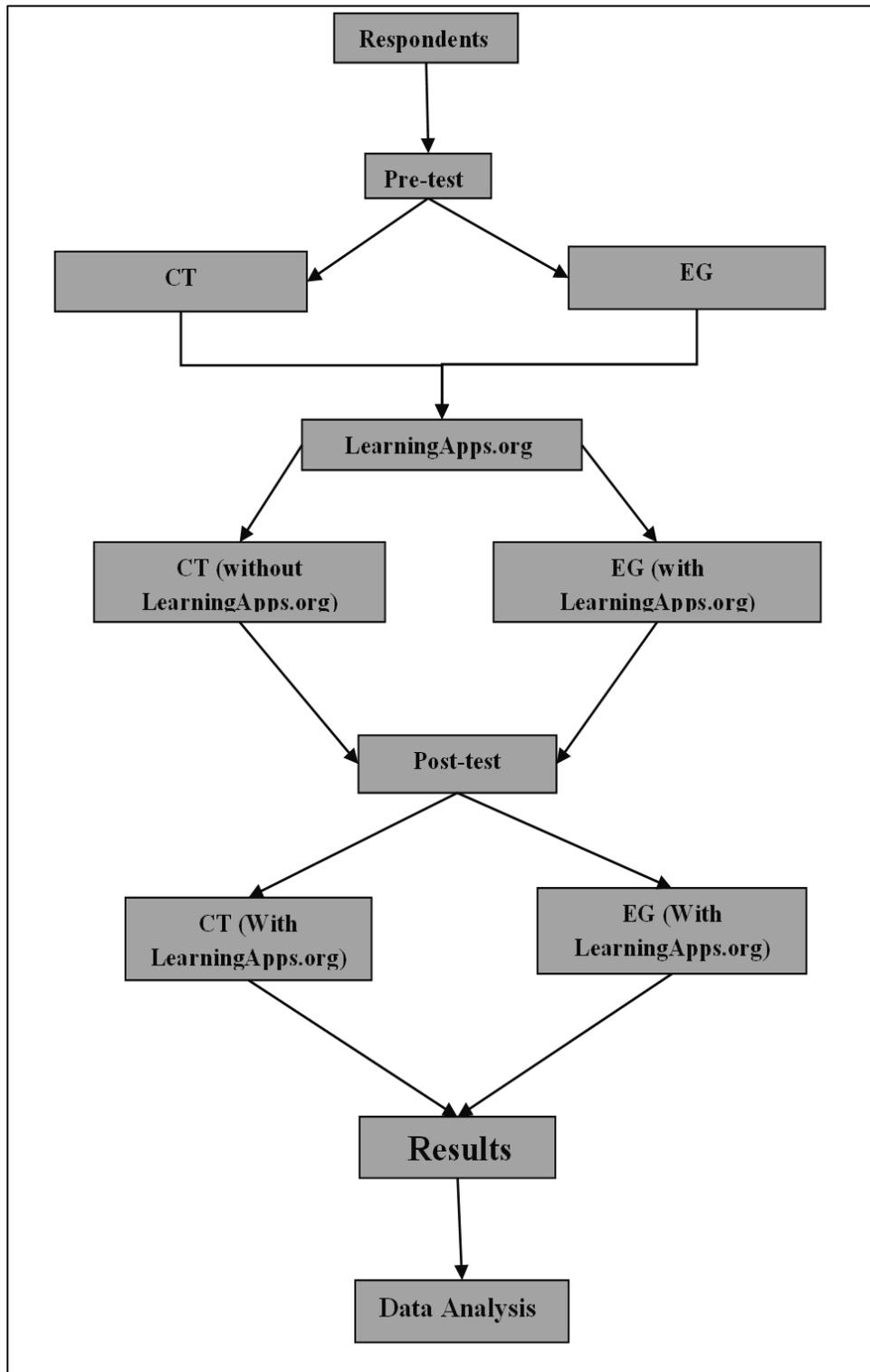


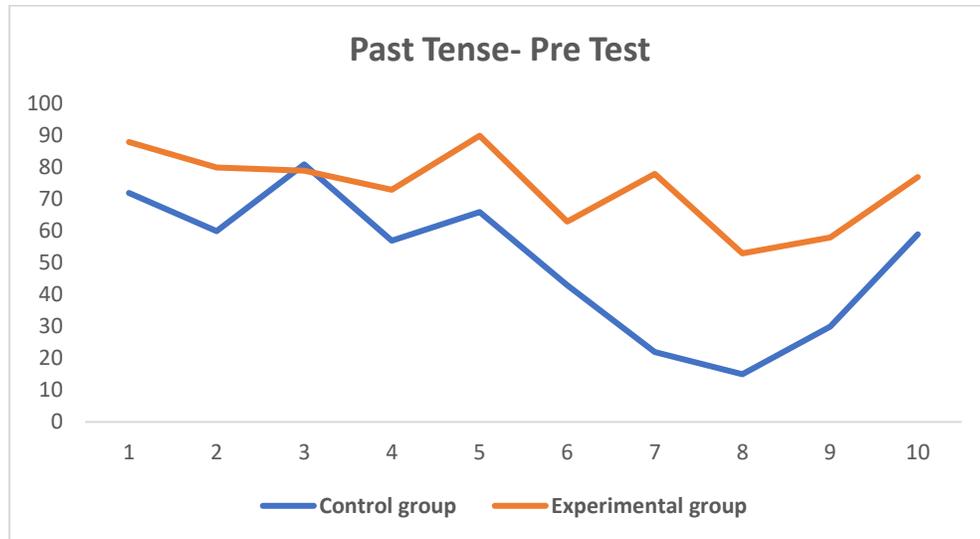
Figure 3: Research design

Here in the Table 1 Pre-Test, the CG seems to be considerable variation in the respondent's results.

For instance, question number 3 received a higher score in the CG than in the EG. In questions number

1,2,4,5,6,7,8,9,10 obtained higher scores in the EG than in the CG. Therefore, at the initial stage, LearningApps.org showed interest in the EG

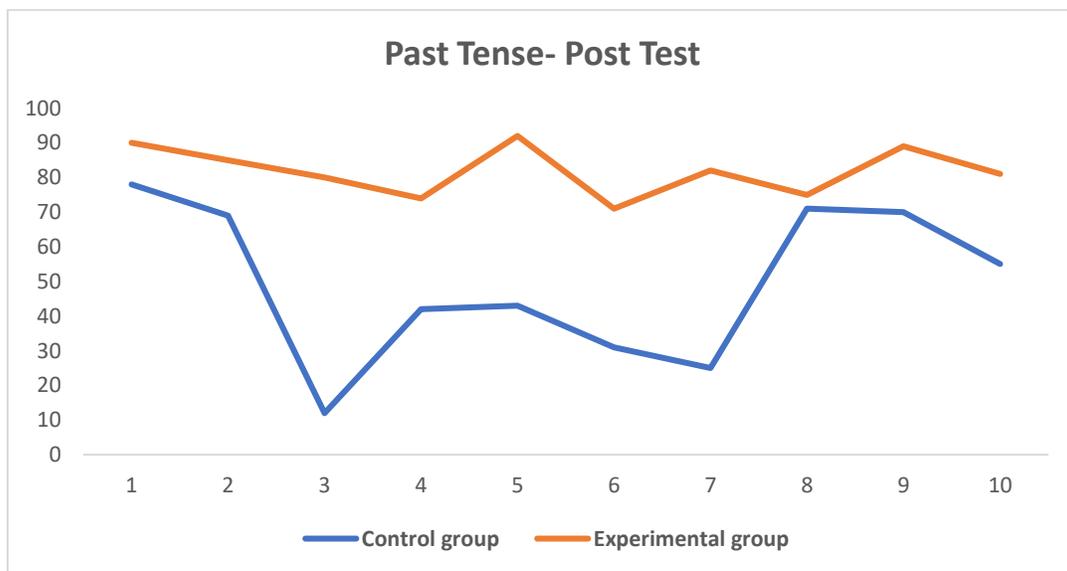
respondents. The average score of the CG in pre-test PT is 50.5 and the average for the EG is 73.9, which is greater than the CG average score.



**Figure 4:** Pre-Test results of PT

For the EG, student-paced training in LearningApps.org was provided and they were taught about the usage and hint icons of LearningApp.org. That helped the EG to improve in the pragmatic competency in the PT. The post-test results for the PT for both the CG and the EG are

shown in Graph 4. Figure 5 shows that the ESL respondents' perceptions of the outcomes of the CG in the post-test of the PT were poorer than the result of the EG. As a result, the instructions given to the responders in the EG were what led to the high improvement.



**Figure 5:** Post-test results of PT

In Table 2 the CG appears to show a significant variance in the respondent's performance in this

Post-Test. Compared to the CG, the EG scored highly on all the questions. This happened, since the EG

respondents initially piqued LearningApps.org's curiosity. The average of the Post-test PT for the CT was 49.6, whereas the average score for the EG was

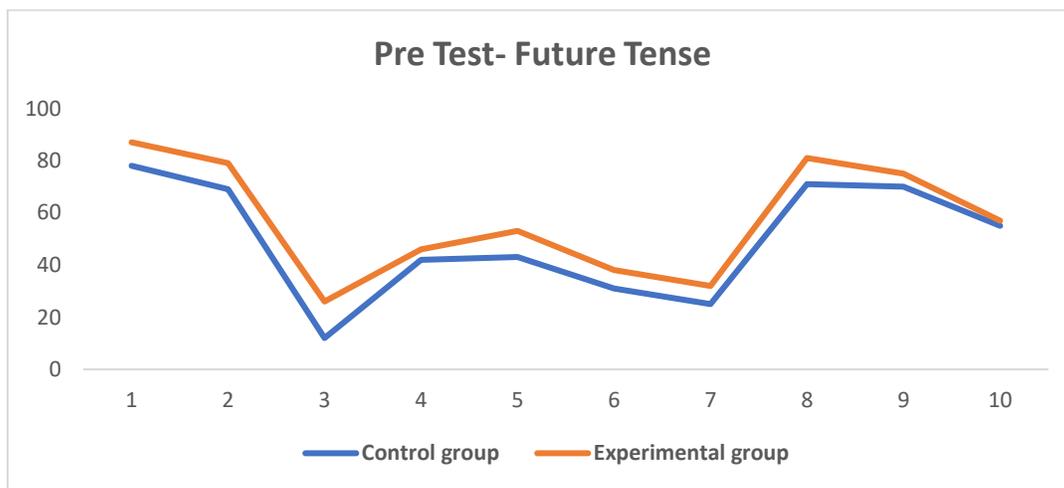
81.9, which is higher than the average score for the CT.

**Table 2:** Results of Post-Test PT of the CG and the EG

S. No	CT	EG
1	78	90
2	69	85
3	12	80
4	42	74
5	43	92
6	31	71
7	25	82
8	71	75
9	70	89
10	55	81
	49.6	81.9

LearningApps.org's FT lessons, which are designed to be completed at the student's own speed, were responsible for the EG's increased pragmatic competency. The pre-test results of the FT for both the CT and the EG is displayed in Figure6. Figure 6 demonstrates that the results of the CT are seen to be

extremely close to the results of the EG in the Pre-test of the FT by the ESL respondents. However, the findings show that the EG performed significantly better than the CT. Therefore, the enhancement was brought about as a result of the instructions that were given to the responders in the EG.



**Figure 6:** Pre-test results of FT

Here in Table 3 the Pre-Test, the CT seems to be considerable variation in the respondent's results. For instance, all the questions received a higher score in the EG than in the CT. Therefore, at the initial stage, LearningApps.org showed interest in the EG

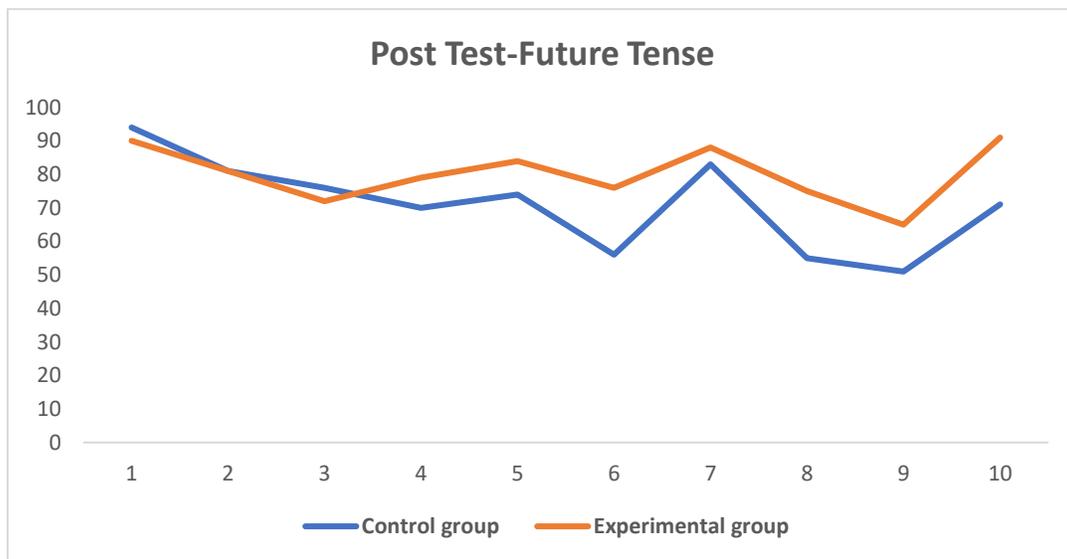
respondents. The result from the Pre-test FT both the CT and EG has slight deviation. The average score of the CT in the pre-test FT in 49.6 and the average for the EG is 57.4, which is greater than the CT average score.

**Table 3:** Results of Pre-Test FT of the CG and the EG.

S. No	CT	EG
1	78	87
2	69	79
3	12	26
4	42	46
5	43	53
6	31	38
7	25	32
8	71	81
9	70	75
10	55	57
	49.6	57.4

In the case of the EG, training in LearningApps.org was made available to be completed at the student's own speed, and they were instructed on the application's various usage and tip icons. The EG was able to enhance their pragmatic proficiency in the FT as a result of this. Graph 6 displays the results of the post-test in the FT for both the CT and the EG. Figure

7 demonstrates that the ESL respondents' outcomes of the CT in the post-test of the FT were lower than the result of the EG. This was because of the EG had given more instruction. The high improvement was brought about as a direct result of the instructions that were provided to the participants in the EG.



**Figure 7:** Post Test results of FT

In Table 4 the CT appears to show a significant variance in the respondent's performance in this Post-Test of FT. Compared to the CT, the EG scored highly on the question numbers 4,5,6,7,8,9,10. The CT had high scores on question number 1 and 3. Question number 2 has the same score in both the CT

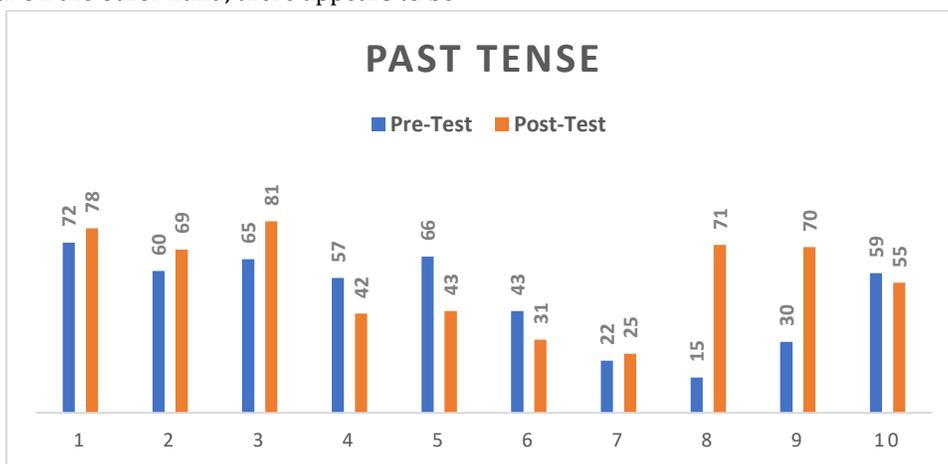
and the EG. This happened, since the EG respondents initially piqued LearningApps.org's curiosity. The average of the Post-test FT for the CT was 71.1, whereas the average score for the EG was 80.1, which is higher than the average score for the CT.

**Table 4:** Results of Post-Test FT of the control and the EG.

S. No	CT	EG
1	94	90
2	81	81
3	76	72
4	70	79
5	74	84
6	56	76
7	83	88
8	55	75
9	51	65
10	71	91
	71.1	80.1

The results of the PT, pre-test and post-test in CT's comparison demonstrated that the learners' pragmatic competency enhanced as a result of the student-paced instruction with LearningApps.org. The findings of both the pre-test and post-test are shown in Figure8. The results of the pre-test and post-test are depicted in Figure8, which shows how much has each participant's performance improved or decreased. On the other hand, there appears to be

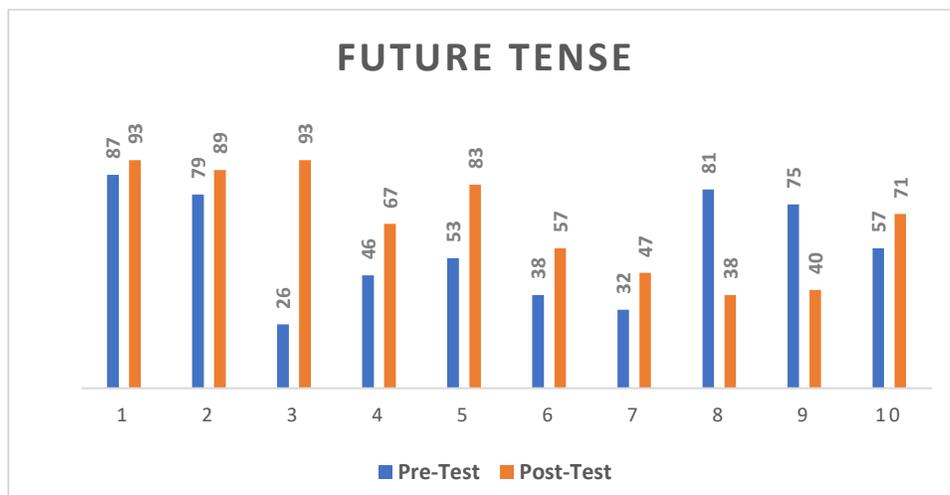
a significant range in the rates of participant advancement. For instance, the answers to questions 4, 5, 6, and 10 obtained better marks on the pre-test PT than they did on the post-test PT. There were differences in performance between the pre-test and post-test for questions 1,2,3,7,8, and 9 with the post-test achieving a higher average score than the pre-test.



**Figure 8:** Results of CT pre-test and post-test in PT

The outcomes of FT, the pre-test and post-test of CT's comparison demonstrated that the learners' pragmatic competency enhanced as a result of the student-paced instruction with LearningApps.org. The findings of both the pre-test and post-test are shown in Figure9. The results of the pre-test and post-test are depicted in Graph 8, which shows how much has each participant's performance improved or decreased. On the other hand, there appears to be

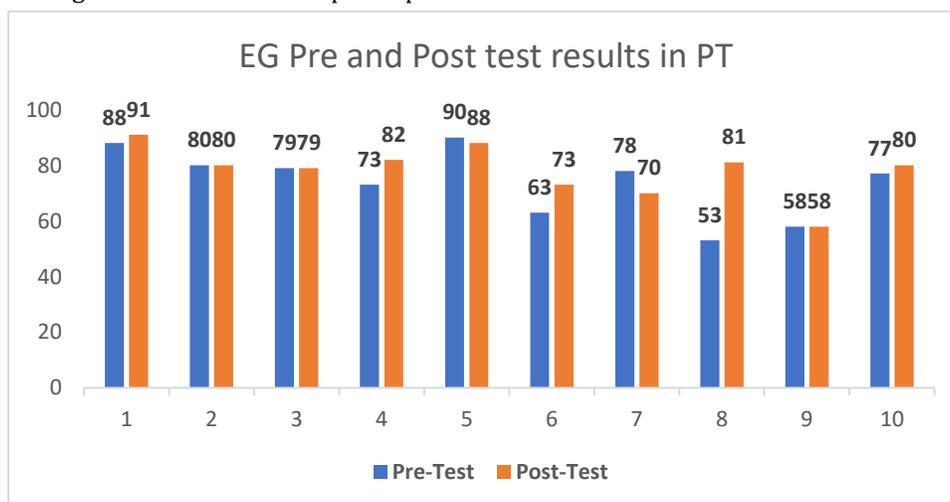
a significant range in the rates of participant advancement. For instance, the answers to questions 8 and 9 obtained better marks on the pre-test PT than they did on the post-test PT. There were differences in performance between the pre-test and post-test for questions 1,2,3,4,5,6,7, and 10 with the post-test achieving a higher average score than the pre-test.



**Figure 9:** Results of CT pre-test and post-test in FT

The findings of the PT, pre-test and post-test in EG’s comparison demonstrated that the learners’ pragmatic competency enhanced as a result of the student-paced instruction with LearningApps.org. The findings of both the pre-test and post-test are shown in Figure 10. The results of the pre-test and post-test are depicted in Figure 10, which shows how much has each participant’s performance improved or decreased. On the other hand, there appears to be a significant range in the rates of participant

advancement. For instance, the answers to questions 5 and 7 obtained better marks on the pre-test PT than they did on the post-test PT. For the questions 2,3, and 9 both pre-test and post-test of PT in EG has same scores. There were differences in performance between the pre-test and post-test for questions 1,4,6,8 and 10 with the post-test achieving a higher average score than the pre-test.



**Figure 10:** Results of EG pre-test and post-test in PT

The results of the FT, pre-test, and post-test comparison in the EG revealed that the learners’ pragmatic competency improved as a consequence of the student-paced teaching with LearningApps.org. This was evidenced by the fact

that the EG participated in the comparison. Graph 10 displays the results of both the pre-test and the post-test that were conducted. The comparison of the results of the pre-test and the post-test is seen in Figure 11. which illustrates by score of each

participant's performance has increased or dropped. On the other hand, it looks like there is a large variation in the ranges. For instance, the answers to question 1 and question 3 received more scores in the pre-test FT than in the post-test FT. Both the pre-test and the post-test of the EG's use of the FT yielded the same results for question number 2. In FT, there were performance differences between the pre-test and the post-test for questions 4,5,6,7,8,9, and 10, with the post-test attaining a high average score than the pre-test. The study's findings align with the principles of metacognitive theory, which involve assessing the work at the beginning and evaluating the strengths and weaknesses of students' writing skills through a need analysis. The majority of

students found it challenging to grasp the concepts of past and future tenses. To address this, the researcher devised a lesson using an Open-source platform to provide students with practice opportunities. Through the utilization of a tool, pupils have augmented their knowledge and comprehension of past and future tense. This demonstrates that pupils possess a significant inclination towards acquiring knowledge through the utilization of open-source tools. The researcher's strategy facilitated the pupils' acquisition of past and future tenses with enthusiasm. Students found it practical and viable to study and utilize open-source technologies. The EG has achieved superior results compared to the CG.

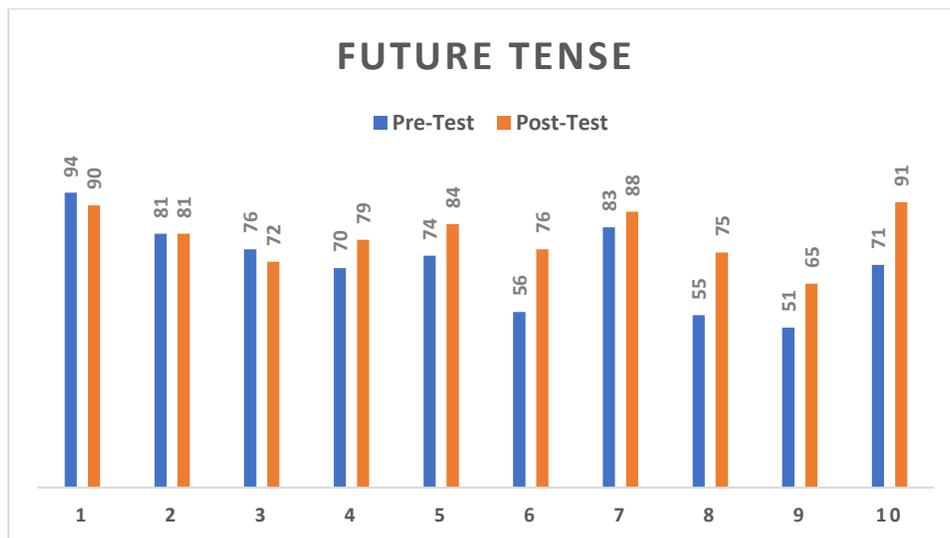


Figure 11: Results of EG pre-test and post-test in FT

### Discussion and Conclusion

The present study investigates the impact of learning PT and FT through LearningApps.org by the ESL learners. In quantitative findings, it was found that learners from EG have improved their PT and FT using the application. This section discusses the results of the study focusing on the three-research objective and three research questions. The first research question and objective addressed the

enhancement of knowledge and understanding in the PT and FT for the ESL learners. The results of the study showed that learners of EG have got enhanced

in both the PT and FT through learningApps.org, this due to the lesson plan that was created in the learningApps.org for the ESL learners.

The findings of CT felt no much improvement in the pre-test and post-test results in both the PT and FT. But, in the EG respondents result were improved with the help of learningApps.org's hint tool to find out the exact tense to choose the correct tense to fit the question.

The second research question and objective addressed the interest towards the learningApps.org for ESL learners to learn PT and FT. The result proves that the CT respondents had no interest in attending

and answering the questions, very few from the CT were serious about answering the questions. Other respondents from the CT had no interest in learning PT and FT. In the EG all the respondents were eagerly answering the questions, as learningApps.org grasped the interest among respondents to choose the correct option from the given options, not only that learningApps.org gave a hint icon to find the particular tense as clue to answer the questions. Therefore, EG respondents found interest in learning PT and FT through learningApps.org. Thus, the findings of CT showed no interest therefore their results were low compared to EG. But EG respondents had interest in learning PT and FT with the help of learningApps.org therefore, their results are high compared to CT.

The third research objective and questions address the feasibility of the respondents towards learning PT and FT through learningApps.org. The EG respondents felt easy to learn and understand the PT and FT only with the help of learningApps.org, without that students might have faced difficulty in understanding and learning the PT and FT. The same pre-test and post-test questions were distributed to the CT respondents. The findings from the CT respondents were not felt much feasible as the EG respondents felt. As CT students have difficulty in understanding and learning PT and FT their results were down compared to the EG. Thus, the result for the third research objective and question shows that, with the help of open-source LearningApps.org learning PT and FT is feasible to understand and apply.

In PT, pre-test results show that the CT has less interest in learning PT compared to the EG. The PT was enhanced through learningApps.org and the result was high in the EG compared to the CT. In the PT, the post-test for the EG results high than the CT in post-test, the EG has given enough training and tips to understand and acquire knowledge regarding PT. But, in the CT, there was no guidance was given regarding learningApps.org.

When it comes to learning in the FT, the findings of the pre-test indicate that the CT is less interested in learning about the FT than the EG. The use of the FT was improved via the use of learningApps.org, and the results were much better in the EG when

compared to the results of the CT. The post-test results for the EG in the FT are higher than the results for the CT in the FT. This is due to the fact that the EG was provided with sufficient instruction and advice to comprehend and learn about the FT. However, among the group that served as the control was given no instruction was provided concerning the learningApps.org website.

Compared to both PT and FT, PT seems to be difficult for both control and EG. FT was felt easy to understand and apply for experimental and CT. These were the results of both the pre-test and post-test.

In CT respondents were not given any instructions regarding LearningApps.org to learn and apply the past and FT in pre-test and post-test. Therefore, the results of CT dropped down compared to EG. In EG respondents were given enough instructions about the LearningApps.org and PT, and FT therefore, the results are high compared to the CT. In both pre-test and post-tense for PT and FT EG results high and shows good results regarding understanding tense by ESL learners.

The primary objective of this study is to assess the level of interest generated for the PT and FT in an English classroom when utilizing LearningApps.org. Through quantitative analysis of open-ended questionnaires and the perception of classroom interaction scale, it was determined that LearningApps.org have the potential to enhance comprehension of the PT and future in English, foster active student participation during lessons, and instill confidence in expressing answers. According to the findings, educators should seriously consider using the benefits offered by LearningApps.org in order to increase other aspects of English language proficiency among a more diverse group of participants and in connection with a wider variety of subject areas. However, further research is required to establish the possible influence that LearningApps.org might have on the extent to which students take responsibility for their own education and study on their own. According to the findings of this research, LearningApps.org should be utilised as an important and long-term instructional tool that focuses on teaching English in order to solve difficulties such as limited preparation time, packed

classrooms, lack of excitement, and less creativity. This recommendation is backed by the findings of the research. The study is limited by the use of an Open-source technology, namely LearningApps.org, for ESL students who are pursuing a B.Tech degree. A greater quantity of samples can be utilized for further research involving several disciplines. Numerous open-source tools are readily accessible free charge, while another may examine future studies using other tools. Not only in 2 tenses the future research can be focused on all 12 tenses.

### Abbreviation

English as a Second Language (ESL); Past tense (PT); Future tense (FT); Control Group (CG); Experimental Group (EG)

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Main Author S.Shruthi: conceptualization, Questionnaire collection, Methodology, Data analysis. Corresponding Author Aravind B.R: Final editing and supporting to conduct experiment.

### Conflict of Interest

The authors declare that there is no conflict of interest regarding the study of this article.

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Not applicable

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### References

- Mahmudah L. Students' understanding On Simple Past Tense Through Voa Learning English Youtube Channel.89-94. <https://doi.org/10.24853/elif.1.2.89-94>
- Fitria TN. Error analysis found in students' writing composition in simple past tense of recount text. ENGLISH FRANCA: Academic Journal of English Language and Education. 2020 Nov 13;4(2):141-60.<https://doi.org/10.29240/ef.v4i2.1154>
- Listia R, Febriyanti ER. EFL Learners' Problems in Using Tenses: An Insight for Grammar Teaching. IJET (Indonesian Journal of English Teaching), 9 (1), 86-95.
- Debata PK. The importance of grammar in English language teaching-A reassessment. *Language in India*. 2013 May 1;13(5):482-6.
- Elturki E. An investigation of grammar problems facing English language learners. *Humanizing Language Teaching*. 2014;16(2):1-2.
- Abdulmalik AA. The difficulties of learning the English tenses in Marib's schools: Issues and needs. *International Journal of Pure and Applied Management*. 2017:16-23.
- Çakır İ. Problems in teaching tenses to Turkish learners. *Theory and Practice in Language Studies*. 2011 Feb;1(2):123-7.
- Thornbury S. *How to teach vocabulary*. Pearson Education India; 2006.
- Watts R, Luoma JB. The use of the psychological flexibility model to support psychedelic assisted therapy. *Journal of contextual behavioral science*. 2020 Jan 1;15:92-102.<https://doi.org/10.1016/j.jcbs.2019.12.004>
- Rizka B. The lexical process of Acehnese borrowing. *Getsempena English Education Journal*. 2017 May 31;4(1):17-26.<https://doi.org/10.46244/geej.v4i1.719>.
- Syahri I. Development of ICT-Based English language learning media. Medan, Faculty of Social Sciences, Medan State University. 2017:123-7.
- Badroeni B, Nasrulloh SF, Zakaria Y. Tenses master application in english grammar learning. *English Review: Journal of English Education*. 2020 Jun 1;8(2):329-36. <https://doi.org/10.25134/erjee.v8i2.2103>.
- Zhong Q, Yan M, Zou F. The Effect of Teacher Feedback on the Simple Past Tense Acquisition in Senior High School Students' English Writing. *World Journal of Education*. 2019;9(3):30-7.<https://doi.org/10.5430/wje.v9n3p30>
- A'yun IL. Teaching and learning English grammar through discourse for EFL students. *Journal of Development Research*. 2019 Nov 30;3(2):89-98.
- Tomakin E. Teaching English tenses (grammar) in the Turkish texts: a case of simple Present tense: Işıl maketi iter. *International Journal of Learning & Development*. 2014;4(1):115-31.<http://www.macrothink.org/journal/index.php/ijld/article/view/5154/4274>.
- Shiny KP. Time and Tense: A Critical Review of Literature. *International Journal of English and Education*. 2013;2(2):32-41. [http://ijee.org/vol\\_2\\_issue\\_2](http://ijee.org/vol_2_issue_2)
- Nurlaela N, Nawir SM. The Implementation of Kahoot in Improving Students' Tenses Understanding in Higher Education. *International Journal for Educational and Vocational Studies*. 2020 Nov 30;2(11).
- Juhari Y. Improving Students' Tenses Mastery through Substitution Drill. *Seltics Journal: Scope of English Language Teaching Literature and Linguistics*. 2018 Dec 4;1(1):53-

62. <https://ejournals.umma.ac.id/index.php/seltics/article/view/47>.
19. Mudhsh BA. A comparative study of tense and aspect categories in Arabic and English. *Cogent Arts & Humanities*. 2021 Jan 1;8(1):1899568. <https://doi.org/10.1080/23311983.2021.1899568>
  20. Miller JB, Comrie Tense. Cambridge: Cambridge University Press, 1985. Pp. x+ 139.-O. Dahl, Tense and aspect systems. Oxford: Basil Blackwell, 1985. Pp. X+ 213. *Journal of Linguistics*. 1987 Mar;23(1):226-31. <https://doi.org/10.1017/S0022226700011178>
  21. Bybee JL, Perkins RD, Pagliuca W. The evolution of grammar: Tense, aspect, and modality in the languages of the world. Vol. 196. Chicago: University of Chicago Press;1994. <https://press.uchicago.edu/ucp/books/book/chicago/E/bo3683926.html>
  22. Dahl O. Tense and Aspect Systems. Oxford, UK: Basil Blackwell;1985. [https://www.eva.mpg.de/lingua/tools-at-lingboard/pdf/Dahl\\_Tense&aspectsystems.pdf](https://www.eva.mpg.de/lingua/tools-at-lingboard/pdf/Dahl_Tense&aspectsystems.pdf)
  23. Laskar NB. Phonology of Bishnupriya, a Contact Language. *Aligarh Journal of Linguistics*. 2021;10(1):43-54.
  24. Laskar NB. Study of Variation and Change in a Bilingual Context the Case of Bishnupriya. 2012. <http://hdl.handle.net/10603/398664>
  25. Mudhsh BA. Cross Linguistic Influences of Arabic Language in Learning English Tense and Aspect: The Case of Sana'a University. Doctoral thesis. Aligarh Muslim University. 2018. <http://hdl.handle.net/10603/219433>
  26. Angelovska T, Hahn A, editors. L3 syntactic transfer: Models, new developments and implications. John Benjamins Publishing Company; 2017 Aug 15. <https://benjamins.com/catalog/bpa.5>
  27. Hufeisen B. Models of multilingual competence. Foreign language education in multilingual classrooms. 2018 Oct 15:173-89.
  28. Sugaya N, Shirai Y. The acquisition of progressive and resultative meanings of the imperfective aspect marker by L2 learners of Japanese: Transfer, universals, or multiple factors?. *Studies in Second Language Acquisition*. 2007 Mar;29(1):1-38. <https://doi.org/10.1017/S0272263107070015>
  29. Andersen RW. Primacy of aspect in first and second language acquisition: The pidgin/creole connection. *Handbook of second language acquisition*. 1996:527-70.
  30. Bardovi-Harlig K. Tense and aspect in second language acquisition: Form, meaning, and use. *Language Learning: A Journal of Research in Language Studies*. 2000;50:1.
  31. Runtuwene WJ. Kesalahan-Kesalahan Gramatikal Bahasa Inggris Dalam Karangan Deskriptif Oleh Siswa Smk N. 1 Amurang. *Jurnal elektronik fakultas sastra universitas sam ratulangi*. 2013 Oct 31;1(3).
  32. Tanjung NKT. Master English 16 Tenses: For Students, College Students, and the General Public. Edited by Sulis. Lembar Langit Indonesia; 2014.
  33. Isnawati I. Students' views on the use of book and web-based materials for their ELT classes: A study on ICT-based education in Indonesian context. *KnE Social Sciences*. 2017 Apr 13:112-20. <https://doi.org/10.18502/kss.v1i3.730>.
  34. El-Hussein MO, Cronje JC. Defining mobile learning in the higher education landscape. *Journal of Educational Technology & Society*. 2010 Jul 1;13(3):12-21.
  35. Elias T. 71. Universal instructional design principles for mobile learning. *International Review of Research in Open and Distributed Learning*. 2011 Feb;12(2):143-56. <https://doi.org/10.19173/irrodl.v12i2.965>
  36. Martínez Pardo A. Computer-based vs. textbook-based grammar instruction: effectiveness and students' perceptions. 2014. <https://academic.e.unavarra.es/xmlui/bitstream/handle/2454/11604/AmaiaMartinezPardo.pdf?isAllowed=y&sequence=1>
  37. Treiman DJ. Quantitative data analysis: Doing social research to test ideas. John Wiley & Sons; 2014 Jan 30.
  38. Chen HH, Yang CT, Lai KK. Investigating college EFL learners' perceptions toward the use of Google Assistant for foreign language learning. *Interactive Learning Environments*. 2023 Apr 3;31(3):1335-50. <https://doi.org/10.1080/10494820.2020.1833043>
  39. Tao Y, Zou B. Students' perceptions of the use of Kahoot! in English as a foreign language classroom learning context. *Computer Assisted Language Learning*. 2023 Nov 2;36(8):1668-87. <https://doi.org/10.1080/09588221.2021.2011323>
  40. Teng MF, Zhang D. Task-induced involvement load, vocabulary learning in a foreign language, and their association with metacognition. *Language Teaching Research*. 2024 Mar;28(2):531-55. <https://doi.org/10.1177/13621688211008798>
  41. Flavell JH. Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American psychologist*. 1979 Oct;34(10):906. <https://doi.org/10.1037/0003-066X.34.10.906>