Benefits of Open-Source Software and Scaffolded Model for ESL Students' Writing Skills

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Abstract

The present study aims to determine the student's enhancement of writing skills. In both the pre-test and post-test. The research adopted the qualitative method, and from that the results were derived. This study focused on 66 Bachelor of Technology students, who learn English as their second language. The results from the pre-test show that most of the students made mistakes in sentence structure, punctuation, and clarity. After the pre-test, the scaffolded model was used to improve the writing skills of students through Open-source software. In the post-test, the writing skills were enhanced with beneficial of having practice with open-source software and scaffolded models. In addition, it is recommended many methods are useful for enhancing writing skills which will help student enhance their writing skills and speaking skills which will be useful for teachers to teach on how to write.

Keywords: Open-source software, Writing skills, Qualitative method, Scaffolded models, Engineering students.

Introduction

Recently, domestic and international research has focused on improving university students' academic writing skills in English as a second language (ESL). Researchers believe ESL students' college success depends on academic writing skills (Bulqiyah et al., 2021; Jabali, 2018; Sujito, 2019; Toba & Noor, 2019). The school requires students to create well-organized essays and tasks. This means students must demonstrate their academic writing skills, use logic, and draw attention to relevant facts (Bakry & Alsamadani, 2015; Ceylan, 2019). First-year students' writing skills are disappointing. Undergraduate students' academic writing struggles have been studied worldwide (Ankawi, 2015).

Some experts say structural, grammatical, mechanical, and lexical difficulties can affect students' academic writing (Ariyanti & Fitriana, 2017; Sabarun, 2019; Toba & Noor, 2019). South Africa's low graduation rates may affect completion delays and graduation rates (Letseka & Maile, 2008). This vision seeks to give everyone access to information and data, encourage critical and multidisciplinary thinking to foster creative thinking, and instill a sense of the future in the next generation to ensure a socially, economically, and environmentally sustainable future (Sung & Choi, 2022). Academic literate writing is essential for higher education academic writing.

Research Objectives

1) To explore Scaffold model with Open-source tool in writing skill to ESL students.

2) To identify the improvement in Students writing skills through the Open-source tool and Scaffold model.

Research Questions

1) Does ESL students were able to learn writing skills with the help of the Open-source and Scaffold model?
2) Do writing skill improved with this scaffold and Open-source tool for ESL students?

Methodology

This research used the qualitative method, which is extensively used in numerous fields to get good findings. Students were tested on writing structure, punctuation, and clarity. Pre-test data were utilized to measure student writing skills and improve them with a scaffold approach. Writing practice was done with the open-source application. ESL students had good post-test writing scores.

Sample and Sample size

This study included 66 first-semester Bachelor of Technology (B.Tech.) students. The key selection criteria were that these people will study English as a second language. Few pupils wrote English clearly, with proper punctuation, and in detail. Students were 17-19. They have separate mother tongues and civilizations. Random selection was done across the population. Structure, clarity, and punctuation were improved via open-source tools and scaffold models. To assess writing ability improvement with a scaffold model and open-source software, pre- and post-test data were collected.

Research Design

After explaining the study purpose, the researcher had participants write a paragraph. The researcher examined the initial writing as a pre-test. The scaffold paradigm was then utilized to teach participants writing structure, clarity, and punctuation. We then practiced writing with open-source software. The intervention practice ended with a post-test. Writing improvement is measured by post-test data.

Result and Discussion

The current study of the research findings is summarised to determine the progress made by the ESL students. Meanwhile the intervention was carried out through Scaffold model and Open-source tool. The results of ESL students test showed that they have improved their writing skills with the help of Scaffold model and open-source tool. Then in the post-test the results showed that the students writing skills were enhanced in writing structure, clarity in writing, using punctuation wherever it is in need.

In pre-test results the structure, clarity and punctuation were analysed. Most of the students (32) were lacking in knowledge of framing structure while writing and few (14) had some struggles in giving the continuity in writing to give clarity in their writings. Most of the students (20) don't follow placing punctuations in the correct place.

In post-test results were analysed for writing structure, clarity, and punctuation. 57 students used punctuations in correct place while writing, 39 students were able to write with clarity. 42 students were able to follow and frame correct writing structure. Therefore, in post-test students were able to perform better in their writing skills.

Comparing Pre-test with Post-test, most of the students have improved their writing skills in better way after Scaffold model is taught to students by the researcher and the practice was given for each section like placing punctuation, writing with clarity, and writing structure.

According to the first research objective and questions, the Scaffold model and open-source tools helped ESL students write clearly, punctuate correctly, and use sentence structure. Students learned, understood, and practiced writing daily. Using the scaffold paradigm, students learned about punctuation, sentence structure, and clarity and continuity in writing.

In the pre-test, students could form sentences but not modify punctuations. They arbitrarily placed articles, obscuring the phrase. Multilingual B. Tech students also have weak sentence structure. Scaffold concept and open-source technology were used for intervention practice and assessments. Scaffolds model and Open-source provide ample practice for grammar, clarity, and writing structure.

 The second research aim and question reveal that ESL students improved their punctuation, clarity, and sentence structure. After the intervention tests and practice, ESL students' writing skills improved in the post-test. They learned where to put punctuation and started doing so almost correctly. ESL pupils' writing skills increased because they correctly framed the sentence. Besides punctuation and structure, writing clarity improved. Scaffold concept and open-source technologies helped ESL students write better.
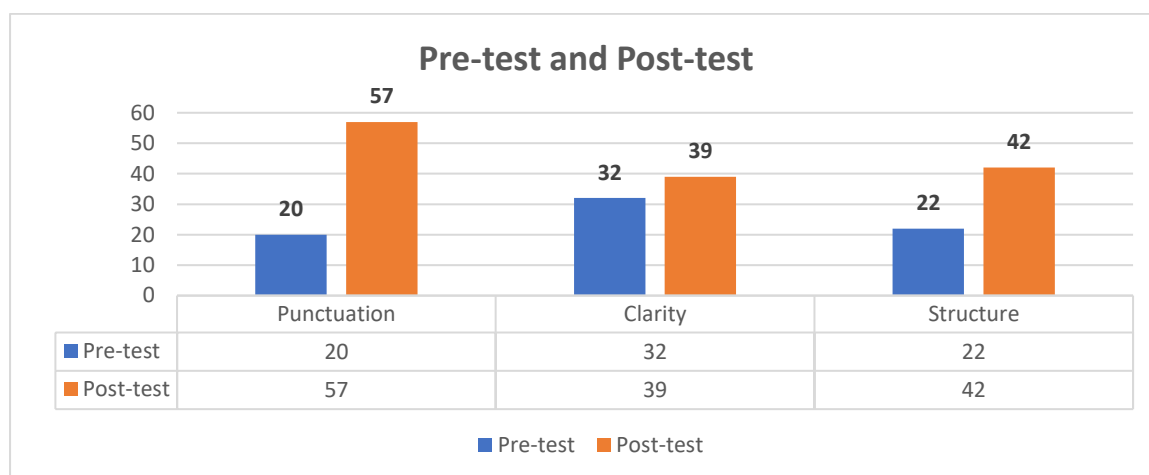
Figure 1. Comparison on Pre-test and Post-test

In comparison with the pre-test and post-test, students have improved their writing skills gradually with the help of the Scaffold model and Open-source tools. In punctuation 20 students were able to place punctuation on the correct place and after practicing students were able to fix the punctuations on the correct place and they were able to understand the importance of the punctuation. In the post-test 57 students were able to fix the punctuations on the correct place.

The clarity of the sentence was good for 32 students in the pre-test and the continuity was missing in the sentence. After practicing in interventions, the result in the post-test was a little higher compared to the pre-test.

The structure of the sentence was completely bad in the pre-test by 22 students and they were not able to frame the sentence in the correct structure. Therefore, many were not able to have clarity in their writing. When ESL students started to learn on how to write sentence

with its structure, then they started understanding with the help of Scaffold model and started practicing with the help of Open-source tools and finally in the post-test 42 students were able to frame the sentence using correct structure. Therefore, all three categories of writing skills were improved with the help of the Scaffold model and open-source tools.

Conclusion

This study identifies ESL learners' challenges. After reviewing pre-test results, students were given a post-test to assess writing improvement. Students struggle with punctuation, clarity, and structural assumptions in writing. They rarely use punctuation, so they had trouble remembering when and what to use. Punctuation, sentence structure, and comprehension. Teachers must teach students to focus on writing.

This study found that ESL students fail to create complex, unambiguous, and punctuated sentences. Many constraints may prohibit this study's results from being generalized. Finally, to get more reliable results, use other tools and identify how ESL learners struggle with other learning abilities.

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