

A Scientific Approach's Impact on Students' Writing Ability

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Abstract

This study intended to determine whether or not SMAN 3 Kulisusu students' writing skills might be improved by using a scientific approach. The research was conducted using quasi-experiments. Students in SMAN 3 Kulisusu's tenth grade made up the research sample. The samples, which included 20 students in each of the two classes (for a total of 40), were purposefully selected. A written descriptive test for pre- and post-tests was the instrument utilized to collect the data. The results showed that the experimental group's mean post-test score (34.5) was higher than the control group's mean post-test score (18.2). With a degree of freedom (df) = 38, the value of the t-test (12.5) was higher than the t-table (2.024) at the level of significance 0.05. As a result, H₀ was disproved, and H_a was accepted. Based on the results, it is considered that using a scientific approach helped the tenth-grade students at SMAN 3 Kulisusu, Kab Buton Utara, improve their writing skills.

Keywords: *Scientific, Impact, Approach, Writing Ability.*

INTRODUCTION

Anyone who can write cannot necessarily write well. According to Brown (2000), writing and speaking are distinct from walking and talking since those two are more culturally unique. Writing in class, in Brown's opinion, is a life skill. Writing is a talent that students must master because it is a way of life. Students must be able to articulate their thoughts, feelings, opinions, critical thinking, and written texts to be successful in school (Brown 2000). Writing is a talent that needs to be acquired by pupils, thus teachers should choose an appropriate technique. However, the majority of the students at SMAN 3 Kulisusu, where the preliminary research was done, lacked writing skills because they tended to be passive while the teacher was more engaged in the classroom. Due to this, the students' writing was limited to what was already

known about the subject. While writing itself serves the purposes of self-expression, informational dissemination, persuasion, and the production of literary works. Although it was shown that the majority of pupils lost interest or curiosity in the topic they were about to describe. The teacher's model text serves as the students' direct guide when composing descriptive text. The teacher's model text serves as the pupils' direct guide when composing descriptive text. Since they did not fully comprehend and did not bother to ask questions, it was difficult for the students to create their writing.

Based on the issues, this study is being done to implement the Scientific Approach as a strategy for teaching writing to students in the tenth grade and to assess its efficacy. The term "scientific approach" refers to a teaching and learning strategy with a scientific foundation. The teacher can enhance the process of teaching and learning with this technique. Cite in Murtini, et al. (2018): Scientific Approach can foster an environment of active learning that encourages students to think creatively and innovatively. A scientific approach to teaching and learning, according to Haryanto in Ningsih (2016), has been designed to allow students to actively construct concepts and the principles of the subject matter through the steps of observation (to identify or solve a problem), formulation of a problem, presentation or formulation of a hypothesis, collection of data using various techniques, analysis of the data, and conclusion and communication of the concept. The guided writing in the Scientific Approach may inspire students and help them enjoy learning writing skills, which can aid in the teaching of writing. Due to their perception that their English writing has improved as a result of the tasks they complete in the Scientific Approach's subsequent steps, students experience less frustration. In light of the preceding explanation, the researcher will evaluate the efficacy of applying the scientific method to improve students' writing skills at SMAN 3 Kulisusu.

LITERATURE REVIEW

Writing

According to Harmer (2004), writing is a process of thinking to generate ideas, consider how to convey them in clear writing and organize thoughts into sentences and paragraphs. According to Dewi (2011), writing is the sense of a speech expressed through phrases, symbols, or syllables. It indicates that a person can use a speech, symbol, or word that the reader can readily understand to explain what is on their mind. Students can use writing to convey their intentions, emotions, and thoughts. Writing can be defined in a variety of ways. Langan (1985) referred to writing as a process in his book. Here, "process" refers to the idea that before writing down material, we have thought about what to say and how to say it. After we were done writing, we read over what we had written and made modifications and revisions.

Writing is, therefore, never a single activity; rather, it is a process with numerous steps, including planning, drafting, revising, editing, reviewing, and publishing. The accurate use of the language system by learners, including their use of grammar, pronunciation, and vocabulary, is referred to as accuracy. When discussing a learner's level of speaking or writing, accuracy and fluency are frequently contrasted. Accuracy can be developed in the classroom through language manipulation exercises. These include exercises that encourage students to catch their errors as well as controlled practice, drills, the study and application of grammatical rules, and others. According to Brown (2004), the elements of accurate writing are content, organization, vocabulary, syntax, and mechanics.

Scientific Approach

The scientific method or model typically applied in the process of scientific learning is the same as the empirical approach to learning (Longbotham, 2006). According to Gunawan et al. in Ratnaningsih (2017), the scientific approach to learning is particularly focused on the facts and reality of student learning, which in practice contribute to the practical application of observation and study. a more scientific strategy that explicitly involves students in activities and encourages them to connect what they are learning in school to their everyday circumstances. Students should be more innovative, inventive, and capable of having amazing insights on how to handle their difficulties by applying learning to real life (Parmin et al., 2016). The scientific learning process is essentially understood by 5 million Indonesians.

Known as Observe, question yourself, attempt, analyze, and communicate in English. Gunawan et al (2017). The scientific method or scientific approach to learning can foster an environment of active learning and encourage students to think more creatively and innovatively about the information being covered in class (Hartono 2014). Sodik & Wijaya (2017) also revealed that students who are exposed to the facts and material reality around them can increase their desire to learn more about it. They also revealed that scientific research methods can transform the environment into a dry but highly engaging learning environment.

According to the Ministry of Education and Culture (2013), there are five steps in the scientific approach for every subject. Being an observer is the first step. Students have received instruction in careful observation, thoroughness, and the pursuit of information. Second, it is anticipated that pupils would grow in their capacity for imagination, curiosity, and skepticism. Thirdly, the talents gained are trustworthy, accurate, disciplined, and employable. Fourth, kids need to socialize with others and work on respecting the opinions of their peers. Finally, networking necessitates that students improve their capacity for verbal and written communication.

METHOD

The Scientific Approach is a technique, to put it simply. In the scientific method, some procedures must be completed in a specific order to reach logical knowledge. According to Sugiyono (2010), this study employs a quasi-experimental methodology and a sort of nonequivalent control group design with a pretest and posttest. This approach uses experimental and control groups for pre-, during-, and post-testing. It attempts to determine whether applying a scientific approach can effectively improve students' writing abilities, particularly regarding the organization and substance of descriptive texts. The study's target audience is SMAN 3 Kulisusu students in the tenth grade during the school year 2020–2021. There were 64 pupils in the tenth grade.

Purposefully selected students from classes X MIA and X IIS 1 served as the sample for the study's experimental and control groups. Each class has 20 pupils, and both classes share a similar level of writing proficiency. Written tests were utilized as the measurement tool to gather data and assess students' descriptive text writing skills. Students take tests twice, once as a pretest and once as a posttest. The pre-test was used to gauge students' prior writing proficiency, and the post-test was used to gauge how well they had improved following treatment.

FINDINGS AND DISCUSSIONS

The improvement of students' writing ability in the experimental group

Before treatment, the experimental class's result mean data was 20.2. After receiving treatment, the experimental class's mean score was 34.5. After the students used a scientific approach to treat their patients, the mean score increased to 34.5. It exceeded the result from the pretest. The percentage of improvement was 70.7%. The improvement percentage shows that teaching English using a scientific approach has improved, particularly in terms of writing skill in terms of term content and arrangement. As a result, the experimental class was employing deep learning and was higher. The analysis's findings suggest that the Scientific Approach has a positive impact on English students' learning outcomes by enhancing their writing skills.

The improvement of students' writing ability in the control group

Even in the Control Group, writing skills have improved. The writing proficiency score of the students on the pretest was 16. The mean student score on the post-test improved to 18.2 after the students were instructed to utilize the Natural Approach. It exceeded the result from the pretest. Even though employing the Natural Approach resulted in an improvement percentage of 13.7%, the mean score or improvement percentage needed to be greater.

The significant improvement of students' writing skill in experimental and control group

The results of the statistical analysis using the t-test showed that the care received by the experimental group using the scientific approach and the control group using the natural approach was very different. The t-test result (12.5), which was higher than the t-table value (2.024), at the level of significance 0.05, and the degree of freedom $(N_1 + N_2) - 2$ $(20 + 20) - 2 = 38$ was used to support the claim. It indicates that the alternative (H_a) hypotheses were accepted while the null hypothesis (H_0) was rejected. The results demonstrated that after using the scientific approach in the experimental class, the students' writing abilities had improved, particularly in terms of substance and organization. In the control class without applying a scientific approach, the mean score is different. The material and organization of both classes have improved, but the experimental class is the best. The adoption of the scientific approach in the experimental class was responsible for this improvement. The results indicate that teaching English using a scientific approach can enhance students' writing abilities at SMAN 3 Kulisusu, Kab. Buton Utara's tenth grade.

CONCLUSIONS

The conclusion that utilizing a scientific approach helped students' writing skills can be inferred from the findings that were previously mentioned. The difference in post-test means scores between the experimental group and the control group served as evidence. With a t-test value greater than the t-table ($12.5 > 2.024$) and a mean score of in the experimental group before and after treatment of 20.2 becoming 34.5 while in the control group before and after treatment 16 becoming 18.2, it is clear that the students' writing in terms of organization and content for both classes was significantly different at the level of significance 0.05 and the degree of freedom $(N_1 + N_2 - 2) = (20 + 20 - 2) = 38$. Compared to the control group, the experimental group performed better. In other words, teaching writing effectively involves using the Scientific Approach.

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