



The Influence of the Deep Learning Approach from the Constructivism Approach Perspective on Biographical Text Writing Skills

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ABSTRACT

The constructivist-based deep learning approach is a learning approach that prioritizes high-level thinking skills through an inductive model that is believed to be able to achieve learning objectives. This study aims to determine: 1) the pre-test results of biographical text writing skills; 2) the post-test results of biographical text writing skills; 3) the effect of implementing a constructivist-based deep learning approach on biographical text writing skills. This study uses a quantitative method with a quasi-experimental design in the form of a one-group pretest-posttest design. The study took place at SMK Telkom 1 Medan in the 2025/2026 academic year. The population of this study was 32 students of class X RPL 2 SMK Telkom 1 Medan who participated in the pre-posttest and learning activities of biographical text writing skills using a constructivist-based deep learning approach. The research sample was 30 students determined based on a statistical formula. The instrument used was a biographical text writing skills test that was compiled using systematic and objective procedures to produce test specifications as a basis for compiling the test. The research data were analyzed using a paired sample t-test. The results of the study showed: 1) the mean pre-test of biographical text writing skills was 48.23 (very poor category); 2) the mean post-test of biographical text writing skills was 84.6 (very good category); 3) the application of a deep learning approach based on a constructivist approach had a significant effect on biographical text writing skills.

Keywords: deep learning, constructivism approach, writing skills, biographical text

Pengaruh Pendekatan *Deep Learning* Perspektif Pendekatan Konstruktivisme terhadap Keterampilan Menulis Teks Biografi

ABSTRAK

Pendekatan deep learning berbasis pendekatan konstruktivisme adalah pendekatan pembelajaran yang mengutamakan kemahiran berpikir tingkat tinggi melalui model induktif yang diyakini mampu mencapai tujuan pembelajaran. Penelitian ini bertujuan untuk mengetahui: 1) hasil pretes keterampilan menulis teks biografi; 2) hasil postes keterampilan menulis teks biografi; 3) pengaruh penerapan pendekatan deep learning berbasis pendekatan konstruktivisme terhadap keterampilan menulis teks biografi. Penelitian ini menggunakan metode kuantitatif dengan desain eksperimen-quasi berupa one-group pretest-posttest design. Penelitian berlangsung di SMK Telkom 1 Medan pada tahun ajaran 2025/2026. Populasi penelitian ini adalah 32 siswa kelas X RPL 2 SMK Telkom 1 Medan yang mengikuti kegiatan pretes-postes dan pembelajaran keterampilan menulis teks biografi menggunakan pendekatan deep learning berbasis pendekatan konstruktivisme. Sampel penelitian sebanyak 30 siswa yang ditetapkan berdasarkan formula statistik. Instrumen yang digunakan berupa tes keterampilan menulis teks biografi yang disusun menggunakan prosedur sistematis dan objektif sehingga menghasilkan spesifikasi tes sebagai dasar penyusunan tes. Data penelitian dianalisis menggunakan uji-t sampel berpasangan. Hasil penelitian menunjukkan: 1) mean pretes keterampilan menulis teks biografi adalah 48,23 (kategori sangat kurang); 2) mean postes keterampilan menulis teks biografi adalah 84,6 (kategori sangat baik); 3) penerapan pendekatan deep learning berbasis pendekatan konstruktivisme berpengaruh signifikan terhadap keterampilan menulis teks biografi.

Kata kunci: deep learning, pendekatan konstruktivisme, keterampilan menulis, teks biografi

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INTRODUCTION

Language plays a crucial role in the intellectual, social, and emotional development of students. Language serves not only as a means of communication but also as a means of thinking, character formation, and cognitive development. According to (Suarta, 2022), language as a medium of communication is understood as a system of regularly arranged sounds used as symbols to convey specific meanings. Language is arbitrary, meaning the relationship between symbols and their meanings is not determined naturally, but rather based on the agreements of its speakers within a language community. Furthermore, language possesses unique characteristics that are universal, productive, varied, and dynamic. Language is used by humans as a medium of social interaction to convey ideas, feelings, and thoughts to interlocutors within a community. Therefore, language serves not only as a means of communication but also as a marker of identity for its speakers. Therefore, mastery of the Indonesian language is an essential foundation for successful learning in all fields of study.

One aspect of language that students must master in learning Indonesian is writing skills. Through writing, individuals have the opportunity to express their thoughts, ideas, and feelings in a coherent and organized manner. Writing ability is the ability to express ideas and thoughts through writing in a complete and clear manner. This ensures that the ideas presented are clearly understood by the reader, in accordance with the principles of academic writing, which emphasize clarity, accuracy, and comprehensibility for the reader. Writing ability relies on active and productive language skills. This ability is an effort to express the thoughts and feelings of a language user through language. Writing is not simply the act of expressing ideas in written form, but rather a complex and creative cognitive process. In its implementation, writers are required to have the ability to carefully choose and structure words, sentences, and paragraphs so that the intended message can be received and understood clearly

by the reader. Thus, writing skills can be applied in Indonesian language learning activities through teaching materials in the form of biographical texts.

The activity of writing biographical texts is one of the materials taught in the writing element in grade X of Vocational High School (SMK). A biographical text is a writing that contains the story or journey of a figure's life, usually related to his life experiences until he achieved success and is able to provide inspiration for many people. According to (Putri et al., 2023) a biographical text is a text that explains the story of his life journey such as his educational history, achievements, life problems and achievements. A biography is a writing compiled by another party that contains a description of the life journey of a figure that is presented in a coherent manner and is based on events that actually happened. Therefore, the ability to write biographical texts needs to be mastered by students, because they must be able to describe the figure of the figure well so that the resulting writing can provide inspiration and exemplary values ??for the reader. Biographical texts are required to be critical in compiling the chronology of events, as well as creativity in describing the human values ??and exemplary behavior that can be taken from the character being told. During the learning activity of writing biographical texts, students still often experience obstacles in compiling biographical texts appropriately. These difficulties are caused by various factors, including language skills, mastery of text structure, and students' interest and motivation in writing.

One of the main reasons is students' low ability to develop ideas or concepts. Many students have a character they want to write about, but they struggle to express these ideas in a systematic and logical writing format. This aligns with Falasiva's (2024) opinion, which states that students' difficulty in writing biographies lies in their ability to organize ideas and construct effective and coherent sentences. Another difficulty encountered in writing biographies is students' limited ability to organize the flow of their writing systematically. This is evident in their lack of understanding of



biographical text structure, such as unclear biographical data or character identities, disorganized presentation of events, and non-chronological sequences of events. Furthermore, the depiction of the character's life background also tends to lack depth. The findings of this study were obtained from observations conducted by researchers with 10th-grade students at SMK Telkom 1 Medan.

Through the teaching and learning process, teachers play an important role in creating an effective and meaningful learning atmosphere so that students can develop language skills optimally, including writing skills. Teachers have a strategic role in organizing, directing, and creating learning conditions that enable students to learn actively, effectively, and enjoyably (Sanjaya 2016). Learning to write, especially writing biographical texts, requires strategies and learning approaches that focus not only on the final result, but also on the thinking process and in-depth understanding of the content of the writing. However, in reality, biographical text writing activities in schools still face various obstacles. Students often have difficulty organizing ideas, structuring texts, and using effective and communicative language.

To overcome these problems, it is necessary to implement a learning approach that can encourage increased motivation, creativity, and critical thinking skills of students. This approach not only improves students' cognitive understanding, but also pays attention to their emotional and social aspects, resulting in more meaningful and enjoyable learning (Syafi'i & Darnaningsih, 2025). This approach aims to eliminate boredom and urgency experienced by students by applying it through games, quizzes, and other physical activities so that learning in the classroom becomes less monotonous (Mutmainnah et al., 2021). In line with this view, in the current digital era, various innovative learning approaches have emerged that utilize technological advances to increase the effectiveness of the learning process, one of which is the deep learning approach. Students can develop language skills optimally, including writing skills. Teachers have

a strategic role in organizing, directing, and creating learning conditions that enable students to learn actively, effectively, and enjoyably (Sanjaya 2016). Learning to write, particularly biographical texts, requires strategies and approaches that focus not only on the final product but also on the thought process and in-depth understanding of the content. However, in reality, biographical writing activities in schools still face various obstacles. Students often struggle to organize ideas, structure the text, and use effective and communicative language. Therefore, a deep learning approach is needed. Deep learning is a learning approach that presents new ideas critically and creatively.

One form of text that demands in-depth understanding is the biographical text. Writing a biography is not simply presenting a person's life story but also requires the ability to understand the values and meanings contained within the character's life journey. Through a deep learning approach, students are guided to delve deeper into the character's life story, interpret the meaning of their struggles, and relate them to the context of their own lives. Thus, the writing process becomes not only an academic activity but also a reflective experience that shapes students' character and critical thinking. Based on observations, student scores remain in the low to moderate category. Of the 30 students who took the test, only 8 students or around 26.6% managed to achieve the minimum score according to the completeness of 75. Meanwhile, 22 students or 73.4% were still below the KKM score. The highest score achieved by students was 82, while the lowest score reached 55, with a class average score of 68.7. These results indicate that most students still experience difficulties in writing biographical texts, where many of them have not been able to follow the text structure correctly, such as the orientation, events, and reorientation sections. In addition, errors in the use of spelling, word choice, and writing effective sentences are also still dominant. Some students write texts descriptively and not chronologically so that the story line becomes unclear.

This situation demonstrates the need for a learning approach that can increase active student participation, stimulate in-depth thinking, and provide opportunities for them to build understanding through direct practical experience. Therefore, the results of this initial observation form the basis for the need to implement a deep learning approach as an alternative learning strategy expected to improve students' ability to write biographical texts systematically, critically, creatively, and in accordance with linguistic rules. Based on this background description, the researcher is interested in conducting research on "The Effect of the Deep Learning Approach on the Biographical Writing Skills of Grade X RPL Students at SMK Telkom 1 Medan."

METHOD

This study used a quantitative approach with a quasi-experimental design to determine the effect of the deep learning approach on students' biographical writing skills.

The research design used was a One-Group Pretest-Posttest Design, which involves one group without a comparison group. In this design, students are given a pretest to determine their initial abilities, then given treatment in the form of a deep learning approach, and concluded with a posttest to determine their improvement after the treatment. The research was conducted at SMK Telkom 1 Medan with students of class X RPL 2 as the subjects.

Data collection was carried out through a biographical writing test given before and after the treatment. The research instrument was a writing test assessed based on aspects of the biographical text structure, linguistic rules, and content.

Data were analyzed using descriptive statistical procedures. The influence of the constructivist-based deep learning approach on biographical text writing skills was determined by calculating the difference between the mean pretest and the mean posttest. If the mean posttest of biographical text writing skills is > 25 of the

mean pretest of biographical text writing skills, then the application of the constructivist-based deep learning model is stated to have an effect on learning biographical text writing skills in class X RPL 2 SMK Telkom Medan.

RESULTS

The mean pre-test of the biographical text writing skills of RPL 2 students of SMK Telkom Medan was 48.23 which is included in the very poor category. The minimum score was 35, the maximum score was 75, and the standard deviation was 11.40.

Table 1
Descriptive Statistics of Pretest Data

| Descriptive Statistics | Pretest |
|------------------------|-----------|
| N | 30 |
| Mean | 48,23 |
| Category | very poor |
| Minimum Score | 35 |
| Maximum Score | 75 |
| Standard Deviation | 11,40. |

The mean post-test of the biographical text writing skills of RPL 2 students of SMK Telkom Medan was 84.60 which is included in the high category. The minimum score was 75, the maximum score was 95, and the standard deviation was 4.57.

Table 1
Descriptive Statistics of Post-test Data

| Descriptive Statistics | Posttest |
|------------------------|----------|
| N | 30 |
| Mean | 84,60 |
| Category | high |
| Minimum Score | 75 |
| Maximum Score | 95 |
| Standard Deviation | 4,57 |



DISCUSSION

Based on the research results, the biographical writing skills of 10th-grade RPL 2 students improved after the implementation of the deep learning approach. This was evident in the differences in pretest and posttest results. In the pretest, the average student score was only 48.23, with a lowest score of 35 and a highest score of 75. These results indicate that students' initial biographical writing skills were still relatively low. This low ability was evident in aspects of biographical text structure, idea development, and the use of inappropriate language rules.

After being treated using the deep learning approach, the posttest results showed significant improvement. The average student score increased to 84.6, with a lowest score of 75 and a highest score of 95. This improvement indicates that the deep learning approach positively impacted students' biographical writing skills. Through this approach, students were more active in understanding the material, connecting learning experiences to real-world contexts, and developing ideas in greater depth and structure.

In addition to the increase in average scores, changes were also evident in the standard deviation of the data. In the pretest, the standard deviation was 11.4, indicating that student abilities were still highly diverse. Meanwhile, in the posttest, the standard deviation decreased to 4.57, indicating that student abilities were more evenly distributed after implementing the deep learning approach. In other words, this approach not only improved student learning outcomes in general but also helped most students achieve better writing skills. These research findings align with Michael Fullan's deep learning theory, which emphasizes conceptual understanding, critical thinking, collaboration, and active student involvement in the learning process. In teaching biographical writing, the deep learning approach helps students understand text structure, develop content based on facts, and use language rules more appropriately. Therefore, the deep learning

approach can be an effective learning alternative for improving students' biographical writing skills.

CONCLUSION

Based on the results of research on the influence of the Deep learning approach on the ability to write biographical texts of class X RPL 2 students of SMK Telkom 1 Medan in the 2025/2026 Academic Year, it can be concluded that the ability to write biographical texts of students before the implementation of the deep learning approach is in the very poor category with the highest pretest score of 75 and the lowest score of 35 with an average of 48.23. The pretest results show that most students have not been able to compose biographical texts systematically according to the structure that includes orientation, series of events and problems, and reorientation. In addition, students still experience obstacles in developing ideas coherently, arranging chronological flows, and applying linguistic rules appropriately and effectively. The ability to write biographical texts of students after the implementation of the deep learning approach is in the very good category. The posttest results show the highest score of 95 and the lowest score of 75 with an average of 84.6. The posttest results showed that most students were able to systematically compose biographical texts according to a structure that included orientation, a series of events and problems, and reorientation. There was a significant influence between the application of the deep learning approach and the improvement of students' biographical writing skills. This was proven through the results of the statistical analysis which showed a significant difference between the pretest and posttest scores. Thus, the alternative hypothesis (H_a) was accepted and the null hypothesis (H_o) was rejected.

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