

The Effect of the Application of Doctor Rubini's Biography as a Resource for Learning History on the Critical Thinking Ability of Class XI of SMA Negeri 1 Tebas

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Abstrak

Penelitian ini dilakukan untuk mengetahui pengaruh penerapan biografi dr. Rubini sebagai sumber belajar sejarah terhadap kemampuan berpikir kritis siswa kelas XI SMA Negeri 1 Tebas. Metode yang digunakan adalah eksperimen dengan desain *Pre-Experimental Design* dan analisis data menggunakan uji prasyarat serta uji *dependent sample t-test*. Sumber data dalam penelitian ini adalah guru mata pelajaran sejarah, siswa kelas XI, dan media pembelajaran. Hasil penelitian menunjukkan bahwa nilai rata-rata pretest sebesar 54,83 berada pada kategori sedang, sementara nilai rata-rata posttest meningkat menjadi 65,32 dengan kategori baik. Rendahnya kemampuan awal siswa disebabkan minimnya eksplorasi nilai-nilai lokal dalam pembelajaran sejarah. Setelah penerapan biografi dr. Rubini, terjadi peningkatan kemampuan berpikir kritis secara signifikan. Hasil uji t menunjukkan nilai signifikansi $0,001 < 0,05$ yang berarti terdapat pengaruh signifikan dari penerapan biografi tersebut terhadap kemampuan berpikir kritis siswa.

Kata kunci: biografi, sumber belajar, berpikir kritis.

Abstract

This study was conducted to determine the effect of the policy of Dr. Rubini's biography as a source of learning history on the critical thinking skills of class XI students of SMA Negeri 1 Tebas. The method used was an experiment with a Pre-Experimental Design design and data analysis using the swimmer test and the dependent sample t-test. The data sources in this study were history teachers, class XI students, and learning media. The results showed that the average pretest score of 54.83 was in the moderate category, while the average posttest score increased to 65.32 in the good category. The low initial ability of students was due to the low exploration of local values in history learning. After the application of Dr. Rubini's biography, there was a significant increase in critical thinking skills. The results of the t-test showed a significance value of $0.001 < 0.05$, which means that there is a significant influence of the application of the biography on students' critical thinking skills.

Keywords: biography, learning source, critical thinking.

INTRODUCTION

Education is the main foundation in building the nation and advancing the quality of human resources (HR). In facing the challenges of the 21st century, education is not only required to produce graduates who are cognitively intelligent, but also able to think critically, creatively, and adaptively to change

(Rismana & Hernawati, 2025:1). One of the efforts that can be made to realize this goal is to improve the quality of the learning process, including in history subjects.

History learning ideally focuses not only on memorizing facts and chronology, but encourages students to develop critical thinking skills (Rismaya, 2018:76).

By learning history, it invites students to become a generation that has an awareness of history, is able to take inspiration and lessons from the struggles of heroes and national tragic events. This encourages the formation of a rational, critical, and empirical mindset, while fostering an attitude of respect for human values (Asmara, 2019:107). Therefore, it is necessary to select and utilize relevant and contextual historical learning resources.

One potential learning resource is through the use of character biographical texts. A biographical text is a writing that contains a story about a figure or individual, as well as the events they experienced (Eliza et al., 2021:589). In history learning, the use of biography can enrich students' learning experiences because it produces personal perspectives that touch more affective and cognitive aspects. In addition, biographical texts are also effective in developing critical thinking skills because they invite students to analyze their backgrounds, socio-cultures, and educational processes (Purnaman, 2015:128). However, the use of biographies of local figures as a source of historical learning is still rarely applied. In fact, regional figures have great potential to be raised as learning inspirations. One of them is dr. Raden Rubini Natawisastra, a figure who fights for humanitarian progress from West Kalimantan who has a big role in the fields

of health, education, and national movements.

Based on initial observations at SMA Negeri 1 Tebas, it was found that history learning still tends to be monotonous. The learning process is dominated by lecture methods and the use of textbooks as the only source of learning. In addition, the lack of introduction to local figures, especially from West Kalimantan, causes students to not know regional figures. This condition has an impact on students' low interest in history subjects and weak critical thinking skills. This can be seen from their inability to relate historical events to the present context. Learning also focuses more on memorizing facts than understanding the meaning behind historical events. Therefore, an effort is needed to present more contextual and meaningful learning. The Biography of Dr. Rubini as a learning resource is expected to be an alternative to improve students' critical thinking skills in learning history.

Dr. Rubini is known as a figure of humanitarian and national movement fighters from West Kalimantan who has contributed to the fields of health and education. Doctor Rubini showed the spirit of independence by joining the Great Indonesia Party (Parindra) when he was assigned to Pontianak in 1937, even though he was already a civil servant doctor (*Government of Indian Arts*). During his tenure, he succeeded in

establishing programs for the advancement of the people, such as the establishment of schools, art groups, cooperatives, and sports groups. In addition to being active in national political activities, dr. rubini continues to carry out his duties both in hospitals and as a traveling doctor. She fought to reduce maternal and child mortality from traditional childbirth, by opening a doctor's and midwifery practice in her home. During the Japanese occupation, she refused to be evacuated by the colonial government and chose to stay in Pontianak to help victims of Japanese plane bombing, including caring for women victims of sexual violence by their soldiers. In July 1943 dr. Rubini also led an incognito movement against the Japanese that succeeded in uniting various community groups, including anti-Nippon Chinese, government employees, and 12 sultans/panembahans. For his services and sacrifices, dr. Rubini was awarded the title of National Hero by the Government of the Republic of Indonesia in 2022 (Prabowo, 2023).

This research was conducted to determine students' critical thinking skills in learning history. Through learning the life stories of biographical figures such as dr. Rubini, students can not only foster a more contextual understanding of history, but also train critical thinking skills to analyze historical events. The figure of dr. Rubini is seen as relevant because her role not

only reflects the spirit of struggle in the national movement, but also shows concern for humanitarian issues in the fields of health, politics, and education in West Kalimantan. This provides a real example that the values of the national struggle can be implemented in real terms at the local level. By studying the biography of dr. Rubini, students are expected to be able to connect national historical events with the local context of West Kalimantan, so that their understanding of history becomes more contextual, relevant, and meaningful in daily life. Based on the problems that have been described, the researcher took the title "The Influence of the Application of Dr. Rubini's Biography as a Source of History Learning on the Critical Thinking Ability of Class XI SMA Negeri 1 Tebas".

METHODS

The research method used is an experimental method, with a design *Pre-Experimental type One-Group Pretest-Posttest Design*. According to (Sugiyono, 2022:72), the experimental method is used to determine the influence of a treatment on other variables. This approach was chosen because it allowed researchers to compare results before and after treatment without involving a control class (Umroh, 2019:51). The research was carried out at SMA Negeri 1 Tebas on November 22-29, 2024 by

involving 31 students of grade XI A1 obtained through a homogeneity test.

Sample is determined by technique *Probability Sampling* Using the approach *Simple Random Sampling*, i.e. sampling from a random population without considering specific strata (Sembiring & Lestari, 2025). With this technique, every member of the population has an equal chance of being selected as a sample.

The research instrument used was a multiple-choice test prepared based on critical thinking indicators according to Facione, which included interpretation, analysis, evaluation, inference, and explanation (Sumargono et al., 2022). The content validity test is carried out through expert assessment, while the empirical validity is analyzed using correlation *Product Momen* (Arikunto, 2014). Furthermore, the research data were analyzed using the Kolmogorov-Smirnov normality test and the Levene homogeneity test (Agustianti & Amelia, 2018). Hypothesis testing was performed with the Dependent Sample T-Test using the help of IBM SPSS software version 25.

RESULTS AND DISCUSSION

Students' critical thinking skills before the application of doctor Rubini's biography as a source of history learning to the critical thinking ability of class XI of SMA Negeri 1 Tebas

Based on the formulation of the first problem in this study, namely how the

level of students' critical thinking ability before the application of dr. Rubini as a source of learning history for grade XI students of SMA Negeri 1 Tebas. The results of the pretest show that students' critical thinking skills are classified as moderate, as seen in the following data:

Table 1. Pretest scores

| Pretest Scores | | Average <i>pretest score</i> |
|----------------|---------------|------------------------------|
| Lowest value | Highest Score | |
| 20 | 85 | 54.83 |

Based on the table, it can be seen that most students still get scores below the Minimum Completeness Criteria (KKM), which can be seen from the average results *Pretest* by 54.83. This is because students have difficulty in analyzing historical material, especially in relating historical facts to the context of the struggles of the characters presented in multiple-choice questions. These difficulties make them feel less confident and have difficulty answering questions. This is in accordance with the results of the research (Wulandari, 2023), which states that a lack of in-depth understanding causes students to have difficulty answering HOTS questions. In addition, the research Nur Rohmah (2022) It also shows that HOTS questions require students to dig deeper into information from trusted sources, which is often not the norm in their learning process.

At SMA Negeri 1 Tebas, the low average critical thinking skills of students at this early stage are also due to the lack

of emphasis on analysis and exploration of local values in history learning. This is in line with the opinion (Pratama et al., 2022:22) which states that local wisdom can be applied in history learning by presenting local history material that is more contextual. Thus, the use of biographies of local figures as a learning resource has the potential to have a positive impact on improving students' critical thinking skills.

Before the application of the biography of dr. Rubini as a learning resource, history learning in the classroom tends to refer to textbooks that lack a local context. As a result, students view history as mere memorization of facts without a deeper understanding. In addition, learning methods that are still dominated by lecture delivery often make students easily feel bored and tend to be passive. Teachers only deliver material based on textbooks, while students only listen without any interaction or active participation during the learning process. This type of learning pattern causes students to be less motivated to think critically and explore the material in depth.

The lack of use of local content in learning also exacerbates this condition. In fact, materials that are relevant to the surrounding environment can make learning more meaningful. Such as the use of the biography of dr. Rubini has never been taught or introduced in history

learning in school, so they only memorize without understanding the relationship between history and their own lives, which has an impact on their low critical thinking skills.

The low *pretest* score shows that a more contextual and meaningful learning resource is needed. The use of biographies of local figures such as dr. Rubini is expected to be an alternative learning resource that is more relevant, as well as can increase students' motivation and critical thinking skills.

Critical thinking skills after the application of doctor Rubini's biography as a history learning resource for class XI critical thinking skills of SMA Negeri 1 Tebas

Based on the formulation of the second problem in this study, namely how students' critical thinking skills after the application of dr. Rubini's biography as a source of history learning in grade XI of SMA Negeri 1 Tebas. The posttest results show that students' critical thinking skills are included in the good category, as seen in the following data:

Table 2. Posttest scores

| Posttest Scores | | Average <i>pretest</i> score |
|-----------------|---------------|------------------------------|
| Lowest value | Highest Score | |
| 30 | 85 | 65.32 |

Based on the table, it can be seen that there is an increase in students' critical thinking skills as shown by an

increase in the average score from 54.83 in the *pretest* to 65.32 in the *posttest*. Thus, the results of data analysis showed a significant difference between the results of *the pretest* and *posttest*, confirming that the application of biography had a positive impact on improving critical thinking skills.

This increase can be attributed to several indicators of critical thinking. The first indicator is the interpretation (interpretation) that can be seen from the ability of students to interpret information from the biography of dr. Rubini as a local figure and connected it with the values of the national historical struggle. The second indicator is analysis (analyzing and relating data) which shows the ability of students to analyze and relate data with appropriate elements, as well as establish the main idea of the information obtained. Students are able to relate historical facts with information in the questions and conduct a more in-depth analysis, as stated by Hendra (2013) in Sumargono et al., (2022:145), that critical thinkers have the ability to analyze data or information systematically and logically. Critical thinkers investigate data and facts carefully, without immediately accepting statements as truth just because they are considered true by others. This shows that critical thinking skills include the stages of in-depth study to obtain valid conclusions.

The third indicator is evaluation (comparing and giving arguments), in this indicator, students show the ability to compare various information provided through questions *Posttest* and convey logical arguments based on historical facts. This shows that evaluation indicators can serve as a benchmark in assessing students' critical thinking skills in history learning (Anis et al., 2021).

The fourth indicator is inference (taking decisions from evidence). At this stage, students are able to compare the various information available in the questions and show a deeper understanding of the role of dr. Rubini in the national struggle. In line with opinion Prabowo (2019), the inference was tested when students were able to relate the historical fact that the Foreman Incident was a tragedy of mass slaughter on June 28, 1944, in which dr. Rubini was also a victim. From this fact, students concluded that dr. rubini's presence in the midst of a critical situation reflected devotion that went beyond his professional duties as a doctor.

The fifth indicator is explanatory (studying and concluding). The results of the study showed an increase in students' ability to analyze information and draw conclusions. Through bio-based learning dr. Rubini students are able to explain the values of nationalism that are relevant in history learning. This is in line with Amr'Accident (2022) which states that the

use of biography of hero figures in learning not only increases the spirit of nationalism, but also strengthens students' analytical and reflective skills. However, some participants still experienced obstacles in formulating logical conclusions, caused by the lack of habit of conducting deep critical thinking processes.

In addition to data analysis, the improvement of critical thinking skills in the experimental class was also observed through observation during the learning process. The results of observations showed that students were more enthusiastic and enthusiastic in participating in history learning, especially because of the direct relationship with the figures studied. The state of the classroom becomes more conducive and students show a higher level of understanding of the material. The application of the biography of dr. Rubini in learning history is carried out through an interactive lecture method mixed with HOTS questions at the cognitive level C4 (analysis), C5 (evaluation), and C6 (creation). This method not only helps students understand historical material better, but it also trains them in critical thinking.

As stated by Bialik and Fadel in (Hadi et al., 2018:15), critical thinking skills are an important aspect of modern education and are integrated in every learning. Biography of dr. Rubini provides

a more relevant historical context for students, making learning more meaningful. The delivery of the narrative of the struggle of this figure is carried out directly by the teacher, accompanied by discussions and questions and answers that encourage active participation of students in the learning process. In this way, students can analyze the values of the struggle that are relevant to their lives.

The effect of the application of doctor Rubini's biography as a source of history learning on the critical thinking ability of class XI of SMA Negeri 1 Tebas

Based on the formulation of the third problem, this study aims to find out the extent of the influence of the application of dr. Rubini's biography as a source of history learning on the critical thinking ability of grade XI students of SMA Negeri 1 Tebas. The research was carried out by analyzing *the results of the pretest and posttest* through multiple-choice questions, which were then analyzed using the T test (*Paired Sample T-Test*) to see the level of significance of the effect. The results of the analysis show that there is a significant influence between the use of the biography of dr. Rubini is in the process of learning history by improving students' critical thinking skills.

The results of the test using the T test (*Paired Sample T-Test*) through SPSS version 25 showed a significance value of $0.001 < 0.005$, which shows that the

application of Dr. Rubini's biography in history learning has a significant impact on improving students' critical thinking skills.

Thus, it can be concluded that the use of the biography of dr. Rubini as a source of learning history has a positive influence on improving the critical thinking skills of grade XI students of SMA Negeri 1 Tebas. In line with opinion Wahyudi et al., (2020:67), critical thinking encompasses a series of cognitive processes, such as identifying, decomposing, and assessing information from various sources, including observation and experience. This skill helps students in understanding historical material more deeply, managing information well, drawing logical conclusions, and finding solutions to various problems faced. In addition, improving critical thinking skills also plays a role in faster and more precise decision-making, which directly impacts improving student learning outcomes.

CONCLUSION

Based on the results of the research on the influence of the application of doctor Rubini's biography as a source of history learning on the critical thinking ability of class XI of SMA Negeri 1 Tebas, which has been carried out through a series of research stages, the following can be concluded:

1. Prior to the application of dr. Rubini's biography as a source of history

learning for the critical thinking ability of class XI SMA Negeri 1 Tebas obtained through *the results of the pretest* was in the medium category, with an average score of 54.83. This condition is caused by the history learning model that still focuses on memorization, the lack of exploration of local history, and the use of lecture methods that cause students to become less active and not motivated to think critically. In addition, the limited availability of relevant and contextual learning resources is also an obstacle in honing students' analytical skills to historical facts.

2. After the application of Dr. Rubini's biography as a source of learning history, the posttest results showed an increase in critical thinking skills that were previously in the medium category, increasing to the good category. The average score of 54.83 in the *pretest* has increased to 65.32 in the *posttest*, which reflects a positive development in students' ability to understand history material.

3. The application of dr. Rubini's biography has been proven to have a significant influence on improving the critical thinking skills of grade XI students of SMA Negeri 1 Tebas. Based on the results of statistical analysis, a significance value of $0.001 < 0.005$ was obtained. This shows that the zero hypothesis (H_0) is rejected and the

alternative hypothesis is accepted, which means that the use of dr. Rubini's biography as a source of history learning has a positive impact on improving students' critical thinking skills. (H_1)

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