



# Criticality in self-assessment: Writing learning innovations in forming critical thinking

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## ABSTRACT

This qualitative research aims to analyze the implementation of writing learning innovations that emphasize criticality in the self-assessment of class V students at SDI Al Munawwarah, Pamekasan, in the 2022-2023 academic year. Using classroom observation methods, teacher interviews, and document analysis, the research results show that this innovation has a positive impact on the development of students' critical thinking. Students experience an increased ability to convey the quality of their writing objectively, identify strengths and weaknesses in arguments, and carry out in-depth analysis of the structure of their writing. These results demonstrate the importance of integrating criticality in self-assessment into writing instruction at the elementary level, which prepares students to face the increasingly complex demands of the educational world. This research provides practical guidance for educators in developing learning innovations that promote critical thinking. The implication is to increase our understanding of the relationship between self-assessment and critical thinking in elementary education.

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## INTRODUCTION

Critical thinking is one of the critical intellectual abilities in student development at the basic education level. It is an important skill that can be developed through self-reflection and metacognitive awareness (Wilson, 2017). Scientists and researchers have long debated the definition and methods of teaching effective critical thinking (Wang & Zheng, 2016). However, the benefits of critical thinking are clear, namely intellectual growth, self-improvement, encouragement to continue learning, and the ability to test assumptions and points of view ((Sellars et al., 2018).

Critical thinking has been done by many previous researchers. Baiduri (2014) focused on elementary school students' thinking processes in solving word problems, categorizing their thinking as situation modeling and group formation or consolidation. Edwards (2005) explored the impact of thinking skills pedagogy on elementary school children's learning and their beliefs about

learning, finding that children were able to substantiate beliefs with evidence and reasoned arguments, as well as develop constructivist models of thinking and learning. Helwig et al. (2009) examined the development of a culture of thinking in the classroom, highlighting the benefits of conversation, fun, and a community of thinkers in increasing children's engagement and producing sophisticated work. A study of criticality in writing in elementary schools has also been carried out. Tavşanlı & Kaldırım (2020) explored elementary school teachers' perceptions of their writing experiences and the factors that shape their writing identities. Cianciolo, (1988) studied critical thinking in children's literature learning in elementary grades. Finally, Tosuncuoglu (2018) highlighted the role of critical thinking in writing and the need for a supportive classroom atmosphere to encourage students to write more freely.

So far, some of these studies have not specifically discussed criticality in students' self-assessments in the context of writing. To fill this gap, this paper focuses on how elementary school students rate themselves in terms of criticality when evaluating and responding to their own writing. This will enable a deeper understanding of the extent to which students are able to develop critical thinking skills in assessing the quality of their own writing. In addition, this paper can investigate ways teachers support the development of criticality in their students' self-assessment and how to influence the improvement of students' overall writing skills. This research is expected to make a significant contribution to addressing the research gap concerning self-critique in students' self-assessment within the context of writing. Focusing on elementary school students, the study aims to provide an in-depth understanding of how extensively students apply self-criticism when evaluating their own writing. Furthermore, it will investigate how teachers can support the development of self-criticism in students' self-assessment and to what extent this influences the overall improvement of writing skills. Therefore, the anticipated outcome of this research is to offer fresh insights and practical guidance for educators in enhancing writing teaching methods centered around fostering students' self-evaluation skills.

To encourage critical thinking through self-assessment, educators can use the following strategies: Encourage written, reflective self-criticism to engage students in self-awareness and metacognition (Wilson, 2017), apply thinking standards and elements of reasoning to interpret, assess, and apply knowledge (Cooper, 2018), promote higher-order thinking skills that develop the capacity for independent learning, a spirit of inquiry, critical thinking, reasoning, and teamwork (Sellars et al., 2018), use assessments that help students reflect on their own thinking and improve skills to think critically (Yüzlü & Dikilitaş, 2022), and foster criticality by questioning reasons or debating how rather than filling students with knowledge and facts (Cooper, 2018). By implementing these methods, teachers can support the development of student's critical thinking skills, which will have significant benefits in the context of their academic education and future careers.

These papers collectively support the idea that critical thinking is an important skill that should be integrated into the basic education curriculum. Bazhouni (2018) emphasized the role of educators in encouraging critical thinking among students through various strategies such as questioning, class organization, written assignments, and debates. Kant (2012) emphasizes the need for students to develop critical thinking skills to navigate the complexities of life and make informed decisions. Dwyer (2011) highlights educators' interest in teaching critical thinking and provides manuals to aid its implementation. PISOŇOVA (2014) argues that critical thinking must be deliberately developed in basic education to enable effective decision-making. Significant development of students' self-assessment and critical thinking abilities can be obtained through mind maps (Harsono & Linarsih, 2020).

The integration of criticality and writing skills in forming critical thinking emphasizes the importance of self-assessment in developing critical thinking skills in writing ((Donnelly & Fitzmaurice, 2011). This approach encourages students to actively assess and reflect on the quality of their own writing, thereby encouraging independence in the learning process. Integration of

writing skills with critical thinking is highlighted as a key aspect. Students are not only taught how to write effectively but also how to think critically when expressing their ideas in written form. Active learning is emphasized, where students are actively involved in evaluating, revising, and improving their own writing. Self-regulation in writing involves awareness and self-control of the writing process, including topic selection, planning, revision, and reflection on the work produced (Harsono et al., 2022).

## RESEARCH METHODOLOGY

This article describes in depth the impact of writing learning innovations that emphasize criticality in the self-assessment of class V students at SDI Al Munawwarah, Pamekasan, during the 2022/2023 academic year. The research was conducted in a school setting to gain more contextual insight into the effects of learning innovations in the elementary school context.

### Participants

Participants in this research were 24 class V students at SDI Al Munawwarah. Apart from that, the two teachers who taught these students became key informants in this research. We chose this school because of the diversity of students in terms of different backgrounds, abilities, and experiences. In addition, the school employs a specific learning approach that focuses on criticality in writing and has a history of improvements in student outcomes in terms of critical thinking.

### Method of collecting data

**Classroom Observation:** We use the classroom observation method to gain a deeper understanding of the interactions between teachers and students during the writing learning process. Observations were carried out using a non-participatory approach, which means the researcher only observed and did not interfere with the learning process. We have developed observation guidelines in advance to ensure consistency in data collection, **teacher Interviews:** Semi-structured interviews were conducted with teachers involved in implementing writing learning innovations. The interviews focused on teachers' experiences in implementing this innovation, their perceptions of its impact on students, as well as the challenges they may face in the implementation process, **document Analysis:** We conduct an analysis of the learning materials used in writing lessons, student writing assignments, and student portfolios, which include their self-assessment notes. Document analysis helps support and enrich findings discovered through observations and interviews.

### Validity and Reliability

To ensure the validity of the research, we used data triangulation, namely combining data from three different sources (observation, interviews, and document analysis). This process helps verify findings and ensure that research results reflect the observed reality. Validity and reliability are also strengthened through reflection on the data, research team discussions, and comparison with previous research.

## RESULTS AND DISCUSSION

In The results presented in this paper include three things: students' self-assessment of their writing, the strengths and weaknesses of students' arguments, and analysis of the structure of students' writing. These three things are presented as follows:

## Student self-assessment

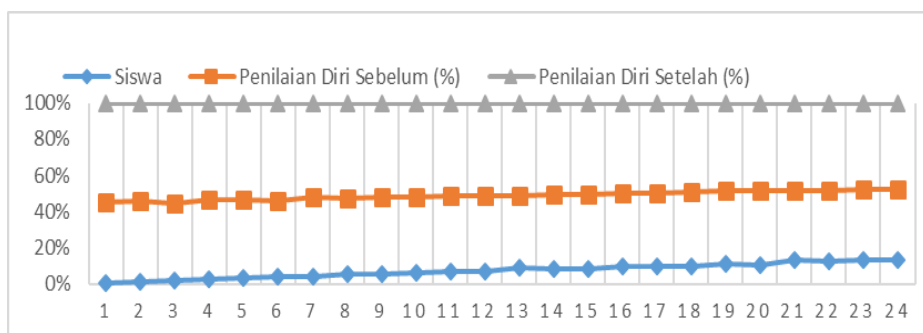


Figure 1. Student self-assessment before and after implementing writing learning innovations

The results of students' self-assessment before and after implementing a writing learning approach that emphasizes criticality are shown in Figure 1. This self-assessment is measured in percentages, and higher scores indicate better writing abilities. The results show that most students improved their self-assessment after participating in the innovation program. The percentage of self-assessment before innovation ranges from 58 to 75 percent. However, after the innovation was implemented, the self-assessment percentage increased from 75% to 91%. This increase shows that writing learning innovations that emphasize criticality have a significant positive impact on students' self-assessment of their writing abilities. These results also show that this innovation succeeded in increasing students' confidence in assessing the quality of their own writing more objectively. However, after the innovation, the self-assessment percentage increased to a range of 75% to 91%. This increase indicates that writing learning innovations that emphasize criticality have a significant positive impact on students' self-assessment of their writing abilities. Apart from that, these results also indicate that this innovation succeeded in increasing students' confidence in evaluating the quality of their own writing more objectively. This improvement is due to students' ability to identify strengths and weaknesses in their arguments and conduct more in-depth analysis of the structure of their writing.

The impact of a writing learning approach that emphasizes criticality on students' self-assessment of their writing abilities is supported by several relevant previous studies. Febriantini (2019) found that students taught using self-assessment achieved better writing results compared to students taught using teacher assessment. Saud (2019) also reported a significant increase in students' writing abilities through self-assessment techniques. Salas (2016) highlighted the positive impact of critical thinking skills on students' writing abilities, especially in terms of content development. In addition, the importance of frequent feedback and clear assessment criteria in improving students' essay writing performance (Bishop, 2015) Overall, these findings indicate that implementing a writing learning approach that emphasizes criticality and includes self-assessment can improve students' writing abilities and confidence in evaluating their own writing skills.

## Strengths and Weaknesses of Arguments

Table 1. Identify strengths and weaknesses in student arguments

| Student | Strengths in Argument                    | Weaknesses in Argument                                 |
|---------|--|--|
| 1       | Ability to provide concrete evidence     | Lack of understanding of key concepts                  |
| 2       | Well-organized argumentation             | Selection of irrelevant evidence                       |
| 3       | Strong language use                      | Deficiency in developing arguments                     |
| 4       | Ability to see from various perspectives | Difficulty in structuring arguments effectively        |
| 5       | Appropriate word choice                  | Struggle in formulating strong arguments               |
| 6       | Deep analytical ability in arguments     | Lack of sufficient support for arguments               |
| 7       | Cohesive and structured argumentation    | Difficulty in presenting arguments logically           |
| 8       | Ability to present strong arguments      | Lack of understanding in research methods and evidence |

| Student | Strengths in Argument                          | Weaknesses in Argument  |
|---------|--|---|
| 9       | Use of relevant and strong evidence            | Difficulty in structuring arguments effectively               |
| 10      | Impactful and precise word choice              | Difficulty in analyzing alternative perspectives              |
| 11      | Well-organized argumentation                   | Lack of understanding of argument logic                       |
| 12      | Ability to analyze different perspectives      | Difficulty in formulating strong arguments                    |
| 13      | Strong and persuasive language use             | Lack of providing concrete evidence                           |
| 14      | Ability to understand different perspectives   | Difficulty in systematically arranging arguments              |
| 15      | Effective and appropriate word choice          | Difficulty in identifying underlying assumptions in arguments |
| 16      | Ability to formulate strong arguments          | Lack of understanding of argument structure                   |
| 17      | Focus on core issues in argumentation          | Difficulty in analyzing implications of arguments             |
| 18      | Use of relevant and supporting evidence        | Difficulty in identifying conflicts in arguments              |
| 19      | Ability to analyze argument implications       | Lack of developing concrete evidence                          |
| 20      | Cohesive and structured argumentation          | Difficulty in systematically presenting arguments             |
| 21      | Ability to understand alternative perspectives | Difficulty in formulating strong arguments                    |
| 22      | Persuasive and appropriate word choice         | Lack of understanding of required arguments                   |
| 23      | Ability to logically structure arguments       | Difficulty in identifying supporting evidence                 |

The results of a comprehensive analysis of the argumentation abilities of the 34 students involved in the research are shown in Table 1. Students' argumentation abilities include various aspects, such as effective use of language, choosing the right words, the ability to see from various points of view, and the ability to analyze arguments in a way that The results of this analysis show significant differences in students' argumentation abilities. Some students demonstrated significant strengths in some aspects of argumentation, while others demonstrated weaknesses that needed to be corrected. This analysis emphasizes the benefits of innovations in writing instruction that emphasize criticality, which have the potential to significantly improve students' argumentation skills. These findings support the claim that a critical understanding of self-assessment is essential to learning to write at the elementary level. This prepares students to face the increasingly complex demands of the world of education.

The findings presented in this research are in line with previous research, which highlights the challenges in teaching argumentative writing. Khairuddin et al. (2021) noted students' awareness of the importance of this skill, while Manuputty (2022) emphasized the effectiveness of improving critical reading skills in the context of argumentative essay writing. Kleemola et al. (2022) highlighted variations in students' ability to take a position in argumentative writing. The conclusion that can be drawn is the importance of a learning approach that emphasizes criticality and self-assessment in overcoming challenges in developing students' argumentation skills, both at the elementary and tertiary levels. This becomes relevant in efforts to prepare students for success in their academic environment and careers.

### Structure of Student Writing

**Table 2.** Analysis of student writing structure

| Student | Analysis of Writing Structure   |
|---------|---|
| 1       | Students can identify how the arrangement of ideas affects the clarity of their writing.  |
| 2       | Students conduct in-depth analysis of their writing structure and successfully address organizational issues.                     |
| 3       | Students are more aware of the need for a clear flow in their writing.  |
| 4       | Their analysis reveals improvement in organizational abilities.   |
| 5       | Students are capable of conducting in-depth analysis of their writing structure and effectively addressing organizational issues. |
| 6       | Students begin to understand the importance of coherence in guiding readers through their writing.                                |
| 7       | Students demonstrate improvement in their ability to logically organize their ideas.  |
| 8       | Students successfully refine unclear sections in their writing.   |
| 9       | Their analysis reflects a better understanding of writing structure.  |
| 10      | Students can identify key aspects of their writing structure and develop arguments effectively.                                   |

| Student | Analysis of Writing Structure  |
|---------|--|
| 11      | Students become more skilled in arranging the sequence of information in their writing.          |
| 12      | Students show improvement in how they structure introductions and conclusions in their writing.  |
| 13      | Students successfully refine word and phrase choices in their writing.                           |
| 14      | Their analysis indicates a deeper understanding of effectively conveying information in writing. |
| 15      | Students demonstrate improvement in understanding coherent writing structures.                   |
| 16      | Students become more proficient in using cohesive language in their writing.                     |
| 17      | Students show improvement in their ability to systematically organize their arguments.           |
| 18      | Students begin to understand the importance of precise sentence construction in their writing.   |
| 19      | Students show improvement in their ability to organize information in their writing.             |
| 20      | Students show improvement in their ability to arrange the sequence of ideas in their writing.    |
| 21      | Students begin to understand how to develop strong arguments in their writing.                   |
| 22      | Students show improvement in how they use evidence to support their arguments.                   |
| 23      | Students become more skilled in using illustrations and examples in their writing.               |
| 24      | Students begin to understand how to structure the main sections of their writing.                |

The results of a comprehensive analysis of progress in students' ability to analyze writing structure over the course of this study are depicted in Table 2. Results show that students have improved their ability to identify the influence of the organization of ideas on writing clarity, overcome organizational problems, and better understand the importance of a cohesive flow in writing. Additionally, students have shown significant improvement in their ability to apply cohesive language in their writing, understand a cohesive flow, and organize ideas logically. This development also includes the ability to organize information, make strong arguments, and use evidence to support arguments. This analysis provides a better understanding of the positive effects of innovation on learning to write. This emphasizes the importance of self-assessment of students' progress in understanding and applying cohesive writing structures. The results are relevant for basic education and equip students with important skills to face the increasingly complex educational challenges of the future.

The results of this research are in line with previous research findings which emphasize how important it is to build consistent and systematic writing skills. Nur Faradhibah et al., (2017) showed that students face difficulties in making their writing consistent and cohesive. They focus on developing ideas, using supporting details, and using accurate punctuation and spelling. Priyatmojo (2012) tries to use cohesion theory in learning to write. The results show that students use cohesive devices better. Riwayatningsih (2015) used a process writing approach and found significant improvements in various aspects of students' writing. Meisani (2022) found that after a writing workshop, students' writing skills improved, especially in terms of grammar and mechanics. These findings overall suggest that inventive teaching methods and self-assessment approaches are critical to improving students' understanding and helping them apply cohesive writing structures.

## CONCLUSION

At the elementary school level, writing learning innovations that instill critical elements in students' self-assessment have a significant positive impact. The implication of this research is to improve writing and speaking abilities. This research shows that learning methods that encourage students to assess the quality of their own writing have a positive impact on their writing and speaking abilities. This not only improves the ability to objectively assess the quality of writing but also causes major changes in students' speaking abilities. The second implication is an increased understanding of cohesive writing structures. This finding is interesting in that learning with a focus on cohesive aspects of writing results in significant improvements in understanding and application of cohesive writing structures. The results of this research contribute as a practical guide for educators to develop learning methods that strengthen critical thinking and consistency in students' writing skills and as an enrichment of complex educational understanding in the form

of an understanding of the relationship between self-assessment, creativity in writing, and critical thinking with the demands of education. increasingly complex. The limitations of this research lie in the sample size used or the limited scope of participants. Future research could consider using larger samples and a variety of students to increase the generalizability of the results, as well as conducting long-term monitoring of the impact of this learning on students' writing abilities at advanced levels or over longer periods of time.

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