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Journal of General Education and Humanities Vol. 5, No. 1, February 2025, pp. 1-1x, https://doi.org/10.58421/gehu.v5i1.759 ISSN 2963-7147 136 Journal homepage: https://journal-gehu.com/index.php/gehu From Answers to Thinking: Students' Critical Thinking Skills in Solving Problems on Nets of Solid Figures Riska Amelia1, Feri Tiona Pasaribu2, Duano Sapta Nusantara3 1,2,3Universitas Jambi, Jambi, Indonesia Article Info ABSTRACT Article history: Received 2025-10-14 Revised 2025-12-13 Accepted 2025-12-13 This study aims to describe students' critical thinking skills in solving mathematical problems, particularly in geometry. The indicators used refer to Facione's framework, which includes interpreting, analyzing, applying, evaluating, and concluding. This research employs a qualitative descriptive method with ninth-grade students as the research subjects. Data were obtained from students' written test results and supported by interviews to explore their reasoning processes. The findings reveal that students' critical thinking skills remain relatively low, especially in evaluation and conclusion. Most students can interpret and apply concepts but have difficulty analyzing problems deeply or verifying their solutions. These results indicate the need to develop innovative teaching materials and learning strategies to enhance students' critical thinking skills. Keywords: Critical thinking skills Geometry learning Mathematical problem solving Nets of solid figures Students reasoning Corresponding Author: Feri Tiona Pasaribu Faculty of Teacher Training and Education, Mathematics Education, Universitas Jambi Email: feri.tiona@unja.ac.id 1. INTRODUCTION The 21st-century education paradigm emphasizes the need for students not only to master disciplinary knowledge but also to develop critical thinking as an essential component of higher-order thinking skills [1]. In mathematics education, critical thinking enables students to understand concepts, identify patterns, and construct logical explanations for problem solutions [2]. Nationally, the current curriculum highlights critical reasoning as a key element of the Graduate Profile Dimension, to be systematically cultivated throughout the learning process [3]. In this context, mathematics learning is expected to move beyond routine procedures and provide opportunities for students to reason, argue, and make justified decisions[4], [5], [6]. Despite this emphasis, Indonesian students' critical thinking skills remain relatively low. Many continue to rely on memorizing formulas without comprehending their conceptual foundations, leading to passive learning behavior and limited ability to justify their reasoning [7]. These issues are compounded by 8 the use of conventional teaching

https://doi.org/10.58421/gehu.v5i1.759 137

materials that do not sufficiently engage students or encourage active participation [8]. Consequently, students are not consistently provided with learning experiences that promote exploration, inquiry, and the articulation of reasoning—conditions essential for the development of critical thinking [9]. This situation can hinder students' ability to interpret problems meaningfully, choose appropriate strategies, and evaluate whether their results are reasonable. Although previous studies have investigated critical thinking in mathematics, limited research has examined how students' critical thinking is reflected in their written solutions, particularly within geometry topics such as nets of solid figures. Written work is important to examine because it provides visible evidence of students' reasoning steps, including how they represent information, connect concepts, and justify conclusions. This gap is significant given that students frequently struggle to connect two-dimensional representations with their corresponding three-dimensional forms. Tasks involving nets of solid figures are, therefore, a relevant context for eliciting critical thinking because they require spatial visualization and a coherent linkage between representations. To address this issue, the present study aims to describe students' critical thinking skills in solving problems involving nets of solid figures, using Facione's indicators as analytical guidance. Facione's indicators operationalize critical thinking into observable components 3 that can be traced in students' solution processes. Accordingly, the research is guided by the following questions: a. How do students demonstrate critical thinking indicators in their written solutions? b. How can students' critical thinking levels be categorized into high, medium, and low based on these indicators? 2. METHOD 2.1 Research Design This study employed a descriptive research design with a qualitative approach. The purpose of the study was to analyze students' critical thinking skills in solving problems related to nets of solid figures. A qualitative descriptive design was considered appropriate because it allows the researcher to capture patterns of reasoning shown in students' written work without manipulating learning conditions [10]. 2.2 Participants The research was conducted on October 12, 2025, at SMPN 7 Muaro Jambi, involving 22 students from Class IX A. The participants were selected through purposive sampling based on the teacher's recommendation and class availability. This sampling strategy was used to ensure participants were accessible and had completed the relevant geometry content in the regular learning sequence [11]. 2.3 Instruments The main research instrument was a written test consisting of one composite geometry problem involving nets of solid figures. The problem required students to interpret the net, identify shapes, and apply relevant mathematical concepts such as the Pythagorean theorem and area formulas. To ensure content validity, the test instrument was reviewed and validated

https://doi.org/10.58421/gehu.v5i1.759 138 by two experts in mathematics education. Using expert validation helped confirm that the task aligned with the targeted content and elicited evidence of critical thinking. The validation focused on clarity, relevance, cognitive demand, and suitability for assessing critical thinking indicators. Students' critical thinking skills were classified into three ability levels high, medium, and low based on their test scores. To support consistent scoring, students' answers were evaluated using the same rubric and criteria across all participants. Table 1 presents the scoring categories and associated indicators. The guidelines for categorizing students' abilities were adapted from Facione [12], as presented in Table 1. Table 1. Categorized students' critical thinking skills Score Interval Category $75 \leq K \leq 100$ High $60 \leq K < 75$ Medium $0 \leq K < 60$ Low Table 1 presents the criteria for classifying students' critical thinking skills based on their average scores. Students who obtained scores between 75 and 100 were categorized as high, those with scores between 60 and less than 75 as moderate, and those with scores below 60 as low. This categorization was then used to select cases that represent contrasting profiles of critical thinking performance. Students' written responses were analyzed according to the indicators of critical thinking skills. The indicator guidelines were adapted from Facione [12], as presented in Table 2. Table 2. Categorized students' critical thinking skills Number of Indicators Critical Thinking Skill Indicator 1 Interpreting the Problem 2 Analyzing the Solution to the Problem 3 Applying the Obtained Solution 4 Evaluating the Obtained Solution 5 Drawing Conclusions Supported by Evidence Table 2 presents the indicators of students' critical thinking skills adapted from Facione [12]. These indicators represent stages of logical and reflective thinking that involve five main aspects: interpreting problems, analyzing solutions, applying obtained solutions, evaluating results, and drawing conclusions supported by evidence. Overall, these indicators assess the extent to which students can understand the context of a problem, use mathematical concepts and symbols appropriately, analyze relationships among information, and formulate conclusions based on logical reasoning and relevant evidence. Thus, the indicators served as an analytical lens to trace not only the final answer but also the reasoning quality expressed in each solution step.

https://doi.org/10.58421/gehu.v5i1.759 2.4 Data Collection Procedures Data were collected through students' written responses to the test. After obtaining students' scores, the researcher categorized all students into high, medium, and low groups. One representative from each group was then selected for deeper analysis based on the completeness and clarity of their written work. Selecting representatives with clearer work helped the analysis focus on the presence or absence of indicators rather than being dominated by illegible or incomplete writing. 2.5 Data Analysis Techniques Students' written responses were analyzed using qualitative descriptive techniques. Each response was examined according to the five indicators of critical thinking. The analysis focused on identifying how these indicators appeared in students' reasoning processes, the strategies used, and the accuracy of the solutions. The results were then used to determine the typical characteristics of high-, medium-, and low-level critical thinkers. To strengthen trustworthiness, the researcher compared patterns across students within the same category and noted consistent features that distinguished one level from another. 3. RESULTS AND DISCUSSION Below are the research findings from three subjects selected based on high, medium, and low ability levels. The analysis was conducted using the indicators of critical thinking skills for each student's answer sheet and categorized according to the critical thinking ability criteria. This section first reports the overall distribution of students' critical thinking levels and then provides an in-depth description of representative responses to illustrate each category. 3.1. Results The researcher used a composite plane figure problem (see Figure 1) as an instrument to measure students' critical thinking skills. This problem was developed in the context of solving geometry problems at the junior high school level, requiring students not only to calculate the area but also to understand the shapes and the logical relationships among plane figures. Each side of the figure in the problem is known to be 7 cm, so students must determine an appropriate problem-solving strategy based on this information. In this study, the composite plane figure is treated as a meaningful geometric representation that can elicit students' reasoning steps, including how they interpret a figure, select concepts, and justify procedures.

https://doi.org/10.58421/gehu.v5i1.759 Figure 1. Critical thinking problem on the topic of composite plane figures This item requires students to interpret the figure by identifying its component shapes, such as squares and triangles, and then analyze the solution process by decomposing the composite figure into simpler parts. Students must apply relevant area formulas, evaluate the accuracy of their work, and conclude the final total area. Thus, the item assesses not only procedural computation but also the depth of students' reasoning in understanding and solving geometry problems critically. Accordingly, each student's work was examined to determine whether the solution visibly reflected the five critical thinking indicators (interpretation, analysis, application, evaluation, and conclusion). The overall results of students' critical thinking performance are presented in Table 3. While the proportions vary, most students fall into the low category, indicating that many still struggle to engage fully with the critical thinking processes required by the task. This categorization was based on the scoring intervals described in the method section, ensuring that the ability levels were determined using consistent criteria. Table 3. Results of Students' Critical Thinking Skills Test Category Number of Students Percentage High 2 9% Medium 4 18% Low 16 73% Table 3 shows that only 9% of students achieved the high category and 18% reached the medium category, while the majority (73%) demonstrated low critical thinking skills. Overall, these results indicate that students' critical thinking ability remains limited. The following section analyzes three representative student responses, each illustrating one of the performance categories: high, medium, and low. The representative responses were selected to show typical patterns within each category and to clarify which indicators tended to appear or be missing at each level.

https://doi.org/10.58421/gehu.v5i1.759 141
Figure 2. Student A's Response (Medium-level critical thinking) Figure 2 presents Student A's response. Student A demonstrated accurate interpretation of the problem by identifying the composite figure as consisting of four triangles and one square (Indicator 1). The student further illustrated analytical thinking by applying the Pythagorean theorem to determine triangle height and linking the concepts of square and triangle area (Indicator 2). These findings provide evidence of the student's ability to apply the derived solution by calculating each component's area and systematically summing the results (Indicator 3). However, the response lacked evaluation activities to verify the accuracy of calculations and did not present an explicit conclusion. Therefore, Student A is categorized as demonstrating a medium level of critical thinking. This pattern suggests that the student could carry out key procedures correctly, but did not show reflective checking or a final statement that synthesizes the result. English Version (INDICATOR I) a. The combination in the figure is constructed from plane

shapes: a square as the base and four equilateral triangles as the sides. Figure 3. Student B's Response (High-level critical thinking) From Figure 3, Student B demonstrated a complete and accurate interpretation by identifying all component shapes, one square and four equilateral triangles (Indicator 1). The student showed strong analytical reasoning by consistently applying the Pythagorean theorem to determine all required dimensions (Indicator 2). The derived information was then systematically applied to compute the area of each shape and determine the total composite area (Indicator 3). Furthermore, the student evaluated the solution by ensuring calculations were consistent and that appropriate units were included (Indicator 4). Finally, the student concluded the problem with a clear and logical final statement of the total area (Indicator 5). Based on these comprehensive indicators, Student C falls into the high category of critical thinking. In other words, the student's written work not only displayed correct procedures

https://doi.org/10.58421/gehu.v5i1.759 but also made the reasoning traceable from initial interpretation to the final verified conclusion. English Version (INDICATOR I) 1. The components forming the composite figure are: □ A square shape □ Equilateral triangle shapes Figure 4. Student C's Answer to the Critical Thinking Skills Test Question Based on Figure 4, Student C correctly identified the basic components of the figure—a square and equilateral triangles (Indicator 1). The student also began a preliminary analysis by writing area formulas and using the Pythagorean theorem to determine the triangle's height (Indicator 2). In contrast, the student's reasoning did not progress beyond this early stage. There was no continuation to the area computation, no application of the analytical results, and no evaluation or conclusion. This limited response reveals minimal engagement with higher-order thinking processes, placing Student B in the low critical thinking category. This response indicates that recognizing shapes and recalling relevant formulas alone was not sufficient; students also needed to connect steps coherently, complete computations, and demonstrate self-checking and concluding behaviors to meet all the critical thinking indicators. 3.2. Discussion The results of this study show that most students demonstrated low levels of critical thinking, with only 9% categorized as high, 18% as medium, and 73% as low. These findings [8] indicate that students generally struggle to move beyond basic interpretation and calculation, particularly in evaluating solutions and drawing conclusions. This pattern suggests [11] that many students can begin solving the task but have difficulty sustaining a complete reasoning process until the final verification and justification stages. As suggested by Facione [12], students' difficulties in these stages may stem from limited metacognitive monitoring and an overreliance on procedural knowledge rather than reflective reasoning. The dominance of low-level responses aligns with previous findings reported in Afifah et al. [13] and Dores et al. [14], which similarly noted that students often perform well on procedural tasks but show weaknesses in analytical and evaluative reasoning. In other words, students may [5] be able to recall formulas and execute calculations but may not consistently explain why a strategy is appropriate or whether the result is reasonable. The results of this study also strongly resemble those of Yulia and Ferdianto [15], who emphasized that junior high school students frequently misinterpret conceptual relationships, struggle to justify their reasoning, and fail to provide coherent conclusions.

 Students in the medium category in this study demonstrated partial fulfillment of indicators—being able to interpret and analyze, but failing to apply or evaluate—which is consistent with Yulia and Ferdianto [15], who found that mid-level achievers often cannot complete higher-order reasoning steps. This highlights that partial [8] understanding of concepts is not automatically translated into complete problem-solving performance when tasks require multi-step linkage between representations and calculations [16]. Likewise, the strong performance of high-category students in interpreting, analyzing, applying, evaluating, and concluding supports the findings of Mahmudah [17], who found that students with strong [6] critical thinking skills can select relevant information, use logical arguments, and solve problems coherently. The written solutions of these students tend to be more structured, showing clear connections between known information, selected formulas, and the final statement of results [18], [19], [20], [21]. These findings imply that mathematics instruction must place greater emphasis on fostering reflective and analytical thinking rather than procedural memorization. Teachers should incorporate open-ended problems that require students to justify their reasoning, guided questioning that prompts deeper explanation and self-evaluation, and peer evaluation activities to help students compare approaches and reflect on the accuracy of their reasoning [22], [23], [24], [25]. For example, teachers can routinely ask students to state the reason for choosing a formula, to estimate whether an answer is reasonable, and to explain how different parts of a composite figure relate to one another. Moreover, learning materials should be designed to encourage metacognitive awareness, such as prompting students to check their solutions, explain alternative strategies, and articulate conclusions supported by evidence. Such strategies are essential for helping students progress from procedural understanding to reflective critical thinking. Embedding “self-check” prompts (e.g., unit checks, re-reading the question, and verifying intermediate results) can make evaluation and conclusion practices more visible and habitual for students. This study was limited by its reliance on a single test item on composite plane figures, which may not fully capture the breadth of students' critical thinking across different mathematical topics. The sample size was also limited to one class, restricting generalizability. Future research should employ multiple test items covering a wider range of concepts and involve larger, more diverse samples. Incorporating interviews or thinkaloud protocols could also provide deeper insights into students’ metacognitive processes. In addition, future studies could examine how different instructional approaches (e.g., problem-based learning or inquiry-based lessons) influence the emergence of each critical thinking indicator in students’ written solutions. Overall, this study underscores the importance of implementing instructional strategies and learning materials that intentionally cultivate students’ critical thinking skills from an early stage. Strengthening these abilities is essential not only for improving mathematical performance but also for supporting the development of higher-order thinking skills required by the Kurikulum Merdeka and preparing students to face increasingly complex real-world challenges. Therefore, cultivating critical thinking should be viewed as a continuous instructional goal, integrated into daily classroom routines rather than treated as an additional or separate learning outcome.

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4. CONCLUSION

This study concludes that students' critical thinking skills remain generally low. The majority of students struggle to apply appropriate solution strategies, evaluate the results of their work, and formulate accurate conclusions. Only a small proportion of students met all five indicators of critical thinking, while most met only one or two. These findings indicate the need for instructional designs that deliberately integrate indicators of critical thinking into learning materials and classroom activities. Strengthening these components is essential for supporting students' analytical abilities, improving their mathematical reasoning, and aligning learning processes with higher-order thinking expectations. Future studies should explore the development and validation of learning tools or instructional models that embed critical thinking–oriented tasks. Research may also investigate how students' metacognitive awareness, problem complexity, and teacher questioning techniques influence the growth of critical thinking skills.

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REFERENCES

[1] Ratnasari Ratnasari, Nikmah Nurvicalesti, and Ami Sulistia Wati, "Implementasi Pembelajaran Mendalam terhadap Kemampuan Berpikir Kritis Matematis Siswa," Algoritma : Jurnal Matematika, Ilmu pengetahuan Alam,

Kebumian dan Angkasa, vol. 3, no. 4, pp. 43–50, Jun. 2025, doi: 10.62383/algoritma.v3i4.576. [2] H. Saputra, “Kemampuan Berfikir Kritis Matematis,” Apr. 2020, doi: 10.17605/OSF.IO/TJ76P. [3] Kemendikdasmen, Pembelajaran mendalam. Jakarta: Pusat 1 Kurikulum dan Pembelajaran, 2025. [4] K. Hidayat, S. Sapriya, S. H. Hasan, and E. Wiyanarti, “Keterampilan 2 Berpikir Kritis Peserta Didik dalam Pembelajaran Hybrid,” Jurnal Basicedu, vol. 6, no. 2, pp. 1517–1528, Jan. 2022, doi: 10.31004/basicedu.v6i2.2265. [5] N. Nurlailah and J. Julkifli, “Strategi Pembelajaran Deep Learning dalam Mengembangkan Karakter Bernalar Kritis Berbasis Profil Pelajar Pancasila pada Siswa Kelas V SDN 1 Dompu,” DIKSI: Jurnal Kajian Pendidikan dan Sosial, vol. 6, no. 2, pp. 273–278, Jun. 2025, doi: 10.53299/diksi.v6i2.2120. [6] W. Pandia and I. Sitepu, “Modul Pembelajaran Berbasis Masalah Kontekstual untuk Meningkatkan Keterampilan Berpikir Kritis Matematika,” JIIP - Jurnal Ilmiah Ilmu Pendidikan, vol. 5, no. 6, pp. 1942–1944, Jun. 2022, doi: 10.54371/jiip.v5i6.655. [7] W. Pandia and I. Sitepu, “Modul Pembelajaran Berbasis Masalah Kontekstual untuk Meningkatkan Keterampilan Berpikir Kritis Matematika,” JIIP - Jurnal Ilmiah Ilmu Pendidikan, vol. 5, no. 6, pp. 1942–1944, Jun. 2022, doi: 10.54371/jiip.v5i6.655. [8] F. T. Pasaribu and Y. Ramalisa, “Quizizz’s Augmented Reality (AR) Based Mathematics Digital Pocketbook Design Using GOLD (Guided, Organizing, Leaflet, Discovery) Learning Model,” Logaritma : Jurnal Ilmu-ilmu Pendidikan dan Sains, vol. 10, no. 01, pp. 67–80, Jul. 2022, doi: 10.24952/logaritma.v10i01.4567. [9] D. S. Nusantara, Z. Zulkardi, and R. I. I. Putri, “Designing pisa-like mathematics task using a COVID19 context (Pisacomat). Journal on Mathematics Education,” Journal on Mathematics Education, vol. 2 12, no. 2, pp. 349–364, May 2021, doi: 10.22342/jme.12.2.13181.349-364.

https://doi.org/10.58421/gehu.v5i1.759 145 [10] Sugiyono, Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R & D. Bandung: Alfabeta, 2015. [11] J. W. Creswell, 9 Research design: qualitative, quantitative, and mixed methods approaches, 4th ed., no. c. Los Angeles: SAGE, 2014. [12] P. Facione, “Critical Thinking: What It Is and

Why It Counts," Insight Assessment, Jan. 2015. [13] R. N. Afifah, U. Oktaviya, R. Qoriroh, and I. W. Wahyuni, "Analisis Kemampuan Berpikir Kritis Dalam Menyelesaikan Soal Cerita Berdasarkan Kemampuan Matematika Siswa," Laplace : Jurnal Pendidikan Matematika, vol. 6, no. 1, pp. 207–216, Jun. 2023, doi: 10.31537/laplace.v6i1.1121. [14] O. J. Dores, D. C. Wibowo, and S. Susanti, "Analisis Kemampuan Berpikir Kritis Siswa Pada Mata Pelajaran Matematika," J-PiMat : Jurnal Pendidikan Matematika, vol. 2, no. 2, pp. 242–254, Nov. 2020, doi: 10.31932/j-pimat.v2i2.889. [15] E. R. Yulia and F. Ferdianto, "Analisis Kemampuan Berpikir Kritis Matematis Siswa pada Materi Trigonometri Ditinjau dari Motivasi Belajar," Pasundan Journal of Mathematics Education : Jurnal Pendidikan Matematika, no. Vol 13 No 1, pp. 30–44, May 2023, doi: 10.23969/pjme.v13i1.7427. [16] N. R. Amalia, I. P. Sihotang, N. Nurhayani, and S. R. Sam, "Pengaruh Media Augmented Reality terhadap Kemampuan Berpikir Kritis Siswa Sekolah Dasar," FONDATIA, vol. 7, no. 1, pp. 41–51, Mar. 2023, doi: 10.36088/fondatia.v7i1.2914. [17] I. Mahmudah, Titin Masfingatin, and I. P. Astuti, "Kemampuan Berpikir Kreatif Siswa SMK dalam Pemecahan dan Pengajuan Masalah Open Ended Materi Barisan dan Deret," Absis: Mathematics Education Journal, vol. 6, no. 2, pp. 74–83, Dec. 2024, doi: 10.32585/absis.v6i2.5876. [18] R. B. Valdez, J. R. Tamoria, and A. R. Barron, "Interactive notebook: effects on creative and critical thinking skills of social studies students," International Journal of Education, vol. 15, no. 1, pp. 50– 60, Feb. 2022, doi: 10.17509/ije.v15i1.46157. [19] A. S. M. Syam, "Analisis kemampuan berpikir kritis dan kreatif dalam pemecahan masalah matematika berdasarkan kemampuan matematika siswa," Ekspose: Jurnal Penelitian Hukum dan Pendidikan, vol. 19, no. 1, pp. 939–946, Jul. 2020, doi: 10.30863/ekspose.v1i1.883. [20] A. M. Wibowo, S. Utaya, W. Wahjoedi, S. Zubaidah, S. Amin, and R. R. Prasad, "Critical Thinking and Collaboration Skills on Environmental Awareness in Project-Based Science Learning," Jurnal Pendidikan IPA Indonesia, vol. 13, no. 1, pp. 103–115, Mar. 2024, doi: 10.15294/jpii.v13i1.48561. [21] Suwandi, R. Putri, and Sulastri, "Inovasi Pendidikan dengan Menggunakan Model Deep Learning di Indonesia," Jurnal Pendidikan Kewarganegaraan dan Politik, vol. 2, no. 2, pp. 69–77, Dec. 2024, doi:

10.61476/186hvh28. [22] M. Salahuddin and S. Syahrir, “Kemampuan 1 Berpikir Kritis Siswa dalam Memahami Masalah Matematika Materi Fungsi,” Jurnal Ilmiah Mandala Education, vol. 6, no. 1, Apr. 2020, doi: 10.58258/jime.v6i1.1122. [23] R. I. Sistyawati et al., “Development of PISA types of questions and activities content shape and context pandemic period,” Infinity Journal, 2 vol. 12, no. 1, p. 1, Feb. 2023, doi: 10.22460/infinity.v12i1.p1-12. [24] R. I. I. Putri et al., “Designing a healthy menu project for Indonesian junior high school students,” Journal on Mathematics Education, vol. 12, no. 1, pp. 133–146, Jan. 2021, doi: 10.22342/jme.12.1.13239.133-146. [25] N. Rosmalinda, A. Syahbana, and T. D. Nopriyanti, “Analisis 4 Kemampuan Berpikir Kritis Siswa SMP Dalam Menyelesaikan Soal-Soal Tipe PISA,” Transformasi : Jurnal Pendidikan Matematika dan Matematika, vol. 5, no. 1, pp. 483–496, May 2021, doi: 10.36526/tr.v5i1.1185.

Sources

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