



Profiling Creative Thinking Skills among Elementary School Students: A Study Based on the Merdeka Curriculum Elements

Jumanto¹, Udin Syaefudin Sa'ud², Wahyu Sopandi³

^{1,2,3}Universitas Pendidikan Indonesia, Bandung, Indonesia

E-mail: ¹antokarof@gmail.com*, ²adpend@upi.edu, ³wsopandi@upi.edu

*Corresponding Author

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ABSTRACT

The creative thinking skills of students have become one of the focuses currently being pursued for improvement in Indonesia. This is manifested by incorporating creative thinking skills as one of the characters to be trained in the Merdeka Curriculum. This research aims to determine the profile of creative thinking skills of elementary school students, thus providing considerations for the implementation and evaluation of the Merdeka Curriculum. The research was conducted using a survey method. The sample consisted of 200 fourth-grade students from 9 elementary schools in 5 districts. There were 106 (53%) female and 94 (47%) male students in the sample. Sample selection was done using purposive sampling, by selecting fourth-grade classes as they have been implementing the Merdeka Curriculum for 2 years. The instrument used was a case-based essay test. The questions referred to the elements and sub-elements of creative thinking skills from the regulations governing the Profil Pelajar Pancasila of the Merdeka Curriculum. The data were analyzed descriptively and quantitatively. The research findings indicate that the creative thinking skills of elementary school students in Surakarta City are still relatively low, with an average score of 49.87. The implementation of the Merdeka curriculum, which focuses on 6 dimensions of student character, one of which is creative thinking, has not yet been able to enhance students' creative thinking skills.

Keywords: *Creative Thinking Skills, Merdeka Curriculum, Elementary School*



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INTRODUCTION

The advancement of civilization in the 21st century, evident in the development of technology and culture, has brought forth new paradigms in every aspect of life, including education. As a result, the education system must improve its quality to meet the demands of this 21st-century development. The Indonesian government has taken strategic policies to enhance the quality of education in the country by designing a new curriculum called the Merdeka Curriculum. The implementation of this curriculum is intended to address the demands of the tight competition in human resources globally in the era of Society 5.0 (Indarta et al., 2022). Unlike the previous curriculum, character education in this Merdeka Curriculum is specifically formulated in the form of the Profil Pelajar Pancasila (Subiyantoro et al., 2024). The Profil Pelajar Pancasila consists of 6 dimensions: (1) Faithful, Devout to the Almighty, and

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Noble-Moraled; (2) Global Diversity; (3) Cooperation; (4) Independent; (5) Critical Thinking; and (6) Creative Thinking (Kemendikbudristek, 2022).

Creative thinking is one of the important components of Profil Pelajar Pancasila that is crucial in facing challenges in the era of society 5.0. The skill of creative thinking is required by everyone to solve problems from various perspectives to tackle complex situations in their surrounding society (Treffinger & Isaksen, 2005). Creative thinking is a mental activity associated with sensitivity to problems, considering new information and unconventional ideas with an open mind, and being able to make connections in problem-solving. Thus, for students, the ability to think creatively influences their learning achievement (Melia, 2016; Supardi, 2012). Creative thinking is a thinking process that leads to the emergence of new ideas, perspectives, approaches, and methods for understanding something (Awan et al., 2019). Equipped with creative thinking skills, students can tackle problems through various problem-solving methods (Wanelly & Fauzan, 2020). However, unfortunately, despite efforts to meet it, Indonesia's creativity index data is still low, at only 0.20, placing Indonesia at 115th out of 139 countries worldwide (Florida et al., 2015). Through the implementation of the Merdeka Curriculum, it is hoped that there can be a significant improvement in creative thinking skills.

Until 2024, the Merdeka Curriculum has been implemented for almost 2 years in all Elementary Schools in Surakarta City. In this curriculum, efforts have been programmed to cultivate creative thinking skills through the strengthening project of the Pancasila student profile. With two years of implementation, significant results in the level of students' creative thinking skills should be visible. Therefore, there is a need for further scientific confirmation to determine the level of students' creative thinking skills who have undergone learning with the Merdeka Curriculum. Based on the research conducted, no research results have been found that outline the creative thinking skills of elementary school students in Surakarta City, measured based on the elements of the creative thinking dimension in the Merdeka Curriculum. Hence, such research is needed. This study aims to determine the profile of creative thinking skills of elementary school students in Surakarta City based on the elements of the creative thinking dimension in the Merdeka Curriculum. After obtaining data on students' creative thinking skills, teachers can identify elements and sub-elements of creative thinking that have been well-trained as well as those that still need improvement. Thus, the results of this research are expected to be considered in the implementation of the Merdeka Curriculum, especially in achieving Creative Thinking skills for elementary school students in Surakarta City.

METHODS

This research utilized a survey method. Survey research is conducted on both large and small populations, but the data studied are from samples taken from that population to discover relative occurrences, distributions, and relationships between variables (Kerlinger, 1973). The sample consisted of 200 fourth-grade students from phase B of 9 elementary schools located in 5 districts in the city of Surakarta. The sample comprised 106 female students (53%) and 94 male students (47%). Sample selection was conducted using purposive sampling, by choosing the fourth grade because these classes had been implementing the Merdeka Curriculum for 2 years.

Data were collected through written tests. The research instrument used was a case study-based descriptive test. The formulation of the test questions began with defining creative thinking skills according to experts and according to regulations governing the implementation of the Merdeka Curriculum. The formulation of the test questions was based on the elements and sub-elements of creative thinking skills taken from government regulations on the Profil Pelajar Pancasila in the Merdeka curriculum. The test questions were validated and revised based on feedback from two experts. The first validator was a lecturer

specializing in elementary school student development, and the second validator was a lecturer specializing in educational technology.

The research data derived from students' responses were analyzed quantitatively using a descriptive approach. The analysis process was conducted in the following steps: (1) correcting student responses based on the answer key, (2) scoring each response and providing a final score based on assessment criteria, and (3) converting the final scores of student responses using criteria for creative thinking skills as outlined in Table 1.

Table 1. *Category of Creative Thinking Skills*

No	Average Score	Category
1	Score \geq 80	High
2	60 - 79	Moderate
3	Score \leq 59	Low

The preparation of test questions begins with defining creative thinking skills based on the opinions of experts and the guidelines for implementing the Merdeka Curriculum. The next step is to determine indicators of creative thinking skills that align with the guidelines of the Merdeka Curriculum. At this stage, it is known that in the government regulation, namely SK BSKAP No. 009/H/KR/2022, the elements and sub-elements of all dimensions of the Pancasila Student Profile, including creative thinking, have been thoroughly explained. Based on this document, the sub-elements are elaborated into indicators and used to create a grid of test questions for the creative thinking skills of fourth-grade elementary school students. Below are the elements, sub-elements, and grids of creative thinking skills for fourth-grade elementary school students that have been compiled:

Table 2. *Elements and Sub-elements of Creative Thinking Skills for Fourth Grade Elementary School Students*

Element of creative thinking	Sub Element of creative thinking	Blueprint of Question
Element 1: Generating original ideas.	Generating new meaningful imaginative ideas from various ideas as expressions of thoughts and/or feelings.	1. Students generate new imaginative ideas that are meaningful from various ideas as expressions of thoughts and/or feelings
Element 2: Producing original works and actions.	Exploring and expressing thoughts and/or feelings according to interests and preferences in the form of works and/or actions and appreciating the produced works and actions.	2. Students explore and express their thoughts and feelings according to their interests and preferences in the form of works and/or actions. 3. Students appreciate existing works and actions
Element 3: Having flexibility in seeking alternative solutions to problems.	Comparing creative ideas to address situations and problems.	4. Students compare existing creative ideas. 5. Students design alternative solutions to address situations and problems

The next step is to create test questions for creative thinking skills based on case studies according to the prepared grid of questions. The questions are then validated by two education experts. Expert judgment is the process of assessment or evaluation conducted by experts in relevant fields to measure the suitability or validity of an instrument, method, or

procedure (Madaus et al., 1987). The first validator is a lecturer specializing in elementary school student development, while the second validator specializes in educational technology. The first validator scored the instrument 86 out of 100 and deemed it suitable for elementary school student development, stating it was highly appropriate for use. The first validator suggested changing the introductory text of the questions from descriptive to narrative storytelling, as elementary school students are more engaged with narratives than descriptive texts. The second validator scored the instrument 84 out of 100 and affirmed that the instrument's construction aligns with the current curriculum and is highly suitable for use. The second validator suggested elaborating on the sub-elements in items 2 and 3, dividing each into two question grids to better measure students' achievement of the creative thinking skills indicators. Based on these suggestions, the test questions were revised to include contextual narrative stories and detailed question grids.

The process of collecting data on students' creative thinking skills from 9 schools involved class teachers. The teachers first read a narrative text from the test instrument, after which the students were asked to answer 5 essay questions related to the text read by the teacher. The research data obtained from students' answers were analyzed quantitatively using a descriptive approach. The analysis process consisted of the following steps: (1) correcting students' answers based on the answer key, (2) assigning scores to each answer and giving a final score based on assessment criteria, and (3) converting the final scores of students' answers using creative thinking skill criteria.

RESULTS AND DISCUSSION

Results

The final scores of student answers, which have been converted based on the criteria of creative thinking skills, are grouped and recorded in a frequency distribution table. Below is the data on creative thinking skills from 200 fourth-grade elementary school students in Surakarta city who are the research sample.

Table 3. Analysis Results of Creative Thinking Skills Data of Fourth-grade Elementary School Students in Surakarta City

CRITERIA	Score in each Question					final scores
	1	2	3	4	5	
Max	20	20	20	20	20	100
Min	0	0	0	0	0	10
Average	8.97	10.43	12.60	8.78	9.10	49.87
MODUS	0	10	20	10	0	40

Based on the table above, it can be seen that the average score of student answers varies for each question. The highest average score is in question number 3, while the lowest average score is in question number 4. Creative Thinking Skills of Elementary School Students in Surakarta City Based on Elements Curriculum Merdeka is still relatively low with an average score of 49.87

The data on students' creative thinking skills can be divided into three types of areas based on the location of their schools from the city center, namely the city center area, the suburban area, and the border area with other districts. A comparison of the data on students' creative thinking skills from each area can be seen in the following table.

Table 4. Differences in students' creative thinking skills based on the location

CRITERIA	City center area	Suburban area	Border areas
Max	100	100	100
Min	10	10	10
Average	57.74	47.08	43.98
MODUS	40	40	40

It can be described in a graph as follows:

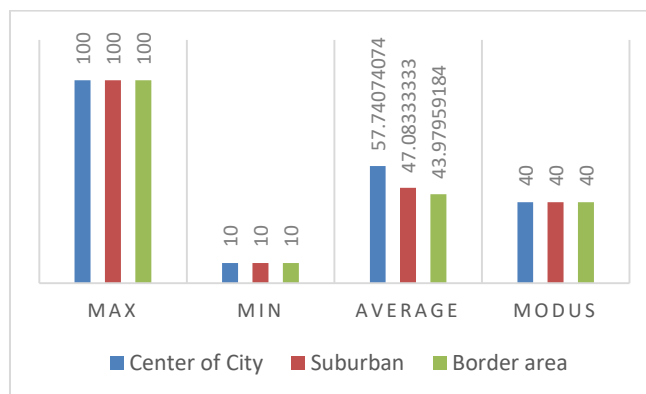


Figure 1. Graph of differences in students' creative thinking skills based on the location

Based on the table and graph above, differences in creative thinking skills of fourth-grade elementary school students residing in the city center of Surakarta, suburban areas of Surakarta, and border areas between Surakarta and other districts can be observed. The best creative thinking skills are demonstrated by students in the city center area with a score of 57.74, followed by students in the suburban area with a score of 47.08, and the lowest average score of creative thinking skills is among students in the border areas with other regions, scoring 43.97.

From the entire research sample that completed the creative thinking skills test, there were 106 male students, accounting for 47%, and 119 female students, representing 53%. The data on critical thinking skills of male and female students can be seen in the table below.

Table 5. Difference in critical thinking skills of students based on gender

CRITERIA	Male Students	Female Students
Max	90	100
Min	10	10
Average	46.44	50.22
MODUS	40	30

It can be described in a graph as follows:

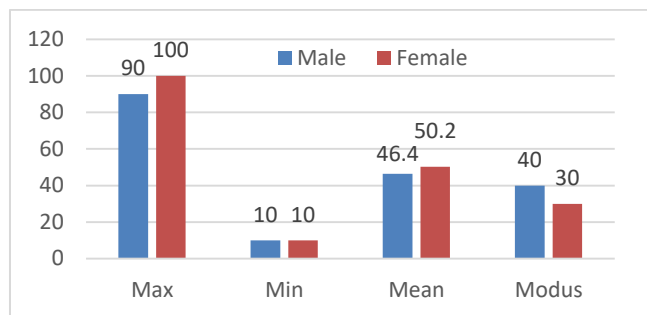


Figure 2. Graph of Difference in critical thinking skills of students based on gender

Based on the table and graph above, it can be seen that female students have a higher average than male students, but the mode score is higher for male students than for female students. There is a difference of 3.78 points in the average score of creative thinking skills between female and male students. The score of creative thinking skills for female students is slightly higher than that of male students. This minor difference in average scores indicates that the creative thinking skills of 4th-grade elementary school students in Surakarta, both male and female, are of nearly the same quality.

To determine the category of students' creative thinking skills, the obtained data on creative thinking skills are then converted using criteria for creative thinking skills. The categories of students' creative thinking skills can be seen in the table below.

Table 6. Category of Students' Creative Thinking Skills

CRITERIA	Number of Students	Percentage
Max	127	63,5%
Min	49	24,5%
Average	24	12%
MODUS	200	100%

It can be described in a graph as follows:

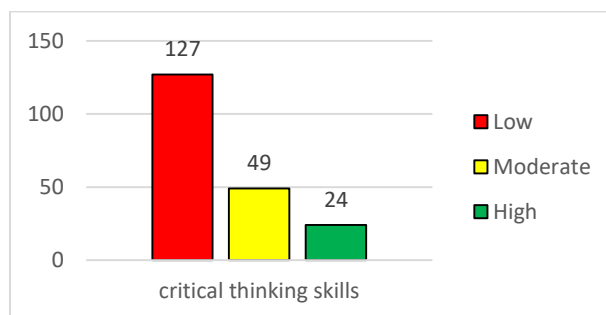


Figure 3. Graph of Category of Students' Creative Thinking Skills

The table shows that students' creative thinking skills are in the low category at 63,5%, the moderate category at 24,5%, and the high category at 12%. Based on this data, it can be concluded that most students 4th-grade elementary school students in Surakarta city have low creative thinking skills. Based on all the data presented above, it can be concluded that the creative thinking skills of elementary school students in Surakarta City are still relatively low with an average score of 49.87. The implementation of the Merdeka curriculum, which focuses on 6 dimensions of student character, one of which is creative thinking, has not been able to enhance students' creative thinking skills. The research findings are similar to those of a study

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conducted by Leasa et al. (Leasa et al., 2021), which examined the creative thinking skills of Indonesian students, with results showing that the creative thinking skills of Indonesian students are still low.

Discussion

There are various instruments to measure creative thinking skills that have been developed through ongoing research and testing by institutions focused on this area. Among them is the Creative Problem Solving Test (CPS), which is a test to measure someone's ability to solve problems with a creative approach that requires participants to write down innovative ideas to overcome specific problems (Isaksen & Treffinger, 1985). The Torrance Tests of Creative Thinking (TTCT) is an instrument to measure critical thinking skills consisting of two subtests: (1) Figural Fluency Test: measuring the ability to generate new and original ideas in the form of drawings. (2) Verbal Fluency Test: measuring the ability to generate new and original ideas in the form of words (Torrance, 1988). Wallach-Kogan Creativity Tests: This test measures creative thinking abilities with various tasks, including connecting unrelated words and completing incomplete pictures (Wallach & Kogan, 1965).

In addition to the aforementioned test instruments, there are also many studies conducted by individuals to develop creative thinking skills assessment instruments. Some studies have developed creative thinking test instruments associated with mathematics subjects (Gumilang et al., 2021; IDBPE Pradipta et al., 2020; Moma, 2015), associated with language subjects (Febriyanti et al., 2017; Yamtinah et al., 2021), associated with science subjects (Marwiyah et al., 2015; Ulfah et al., 2016; Utama et al., 2022). Creative thinking skills test instruments can take the form of multiple choice, essay, or complete images.

According to Munandar (Munandar, 1992), there are four indicators of creative thinking, including (1) fluency, (2) flexibility, (3) originality, and (4) elaboration. According to Hu & Adey (Hu & Adey, 2010), creative thinking skills include three dimensions of the Scientific Structure Creativity Model (SSCM), namely (1) process, including imagination and thinking; (2) trait, including originality, flexibility, and fluency; (3) product, including science problems, science phenomena, science knowledge, and technical products. According to Treffinger (Treffinger & Isaksen, 2005), the specific characteristics of creative thinking (divergent thinking) include fluency, flexibility, originality, elaboration, and metaphorical thinking. According to Ülger & Morsünbül (Ülger & Morsünbül, 2016), the dimensions of creative thinking skills include fluency, originality, abstraction, elaboration, and rejection of premature conclusions.

Many studies aimed at developing instruments for creative thinking skills have been conducted. The indicators of creative thinking skills commonly used to develop instruments include fluency, flexibility, originality, and elaboration (Annisa et al., 2023; Jumanto & Adi, 2022; Solihah & Sunaryo, 2023; Warodiah et al., 2023). However, some studies develop instruments using indicators other than the four mentioned above (Fратиwi et al., 2021; Tarida & Fitri, 2022). Currently, education in Indonesia implements the Merdeka Curriculum. The curriculum has been supplemented with detailed creative thinking skills that students must achieve at each age/stage. Therefore, this study uses the creative element dimension in the Pancasila Student Profile as indicators and to create grids for creative thinking skills test questions. This is what distinguishes it from other studies on creative thinking skills.

Based on the research data, it is known that there is a difference in the scores of creative thinking skills between female and male students. The average score of creative thinking skills for female students is 50.22, while the average score of creative thinking skills for male students is 46.44. Although there is a difference in scores of 3.78 between female and male students, the scores do not indicate a significant difference. These research findings are consistent with a study conducted by Adiasuty, Suprpto, Ulfa (Adiasuty et al., 2022; Suprpto et al., 2018; Ulfa et al., 2018) some state that gender does not influence the level of

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creative thinking skills. However, other research indicates that female students tend to have better creative thinking skills than male students (Aminah et al., 2023; Kurnia et al., 2021; Masythoh & Nuriadin, 2021). There is also research showing that male students tend to have better creative thinking skills than female students (Cahyani et al., 2022). The low level of creative thinking skills will impact the quality of education in Indonesia, thus solutions need to be sought. One possible solution is for teachers to use teaching models proven to enhance students' creative thinking skills.

CONCLUSION

Based on all the data presented above, it can be concluded that The Profile of Creative Thinking Skills of Elementary School Students in Surakarta City Based on Elements Curriculum Merdeka is still relatively low with an average score of 49. The score of creative thinking skills for female students is slightly higher than that of male students. This minor difference in average scores indicates that the creative thinking skills of elementary school students in Surakarta, both male and female, are of nearly the same quality. There are differences in the creative thinking skills of elementary school students whose schools are located in the city center, in the suburban areas of the city, and the border areas between Surakarta city and other districts. The best creative thinking skills are demonstrated by students whose schools are located in the city center, followed by students from suburban areas, and the lowest skills are exhibited by students from border areas with other regions.

The results of the study can be used by teachers, school principals, and the education department as the basis for decision-making related to the implementation of the Merdeka Curriculum. The results of this research can also be followed up with further studies aimed at enhancing students' creative thinking skills.

CONFLICT OF INTEREST

The author states there is no conflict of interest.

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