Creative Thinking Skills Profile of Fifth Grade Students

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Abstract
Creative thinking skills are crucial 21st-century competencies that need to be developed in elementary schools through contextual, student-centered learning. This qualitative descriptive research serves as a preliminary study to describe the creative thinking profile of fifth-grade students at SDN 1 Ngemplak during Natural and Social Sciences *(IPAS) learning. Nine subjects were purposively selected based on their variations in academic ability. Data were collected via tests covering four indicators (fluency, flexibility, originality, and elaboration), observation, and documentation, followed by a qualitative descriptive analysis. The results indicate that students' overall creative thinking skills remain low (57%). Fluency achieved the highest score (78%), followed by flexibility (66.67%), whereas originality and elaboration were low (44.44%). This suggests that students can generate multiple ideas but lack optimal novelty and depth in their ideas. These findings emphasize the need to strengthen IPAS learning strategies that facilitate exploration, encourage divergent thinking, and comprehensively stimulate student creativity*
Keywords: *creative thinking, IPAS, elementary school.*

Abstrak
Keterampilan berpikir kreatif merupakan kompetensi abad ke-21 yang perlu dikembangkan di sekolah dasar melalui pembelajaran kontekstual yang berpusat pada siswa. Penelitian deskriptif kualitatif ini merupakan studi awal (*preliminary study*) untuk mendeskripsikan profil keterampilan berpikir kreatif siswa kelas V SDN 1 Ngemplak pada pembelajaran IPAS. Subjek penelitian sebanyak 9 siswa dipilih secara *purposive* berdasarkan variasi kemampuan akademik. Pengumpulan data menggunakan tes (kelancaran, keluwesan, orisinalitas, dan elaborasi), observasi, serta dokumentasi, lalu dianalisis secara deskriptif kualitatif. Hasil menunjukkan kemampuan berpikir kreatif siswa secara umum masih kurang (57%). Kelancaran mencapai skor tertinggi (78%) diikuti keluwesan (66,67%), namun orisinalitas dan elaborasi masih rendah (44,44%). Hal ini mengindikasikan siswa mampu menghasilkan banyak ide, tetapi belum optimal dalam kebaruan dan pendalaman gagasan. Temuan ini menegaskan perlunya penguatan strategi pembelajaran IPAS yang memberi ruang eksplorasi, mendorong pemikiran divergen, dan menstimulasi kreatifitas siswa secara menyeluruh.
Kata kunci: berpikir kreatif, IPAS, sekolah dasar.

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INTRODUCTION

Creative thinking is an essential skill that students need to have in the 21st century, in line with the rapid development of science, technology, and the dynamics of future work demands (Anggrella & Permatasari, 2023). This skill is not only related to the ability to generate new ideas, but also supports students in solving problems in innovative and adaptive ways. In addition, creative thinking plays a role in improving students' ability to express ideas, collaborate, and actively engage in contextual and dynamic learning processes. In line with this, various international studies place creative thinking skills as a core part of 21st century skills that need to be developed from primary education through learning that provides space for divergent thinking and original ideas (OECD, 2025; Foster & Schleicher, 2022).

The development of creative thinking skills is gaining attention in global education studies, which emphasise that creativity is a fundamental competency that needs to be instilled from primary education onwards. Creativity is seen as an important foundation for lifelong learning and for preparing students to face future challenges and changes (Nuril et al., 2025). Therefore, learning in primary schools should ideally be designed to encourage new ideas, the courage to explore, and open-minded thinking through active and meaningful learning experiences.

However, various research results show that the creative thinking skills of primary school students have not developed optimally. A number of studies reveal that the creative thinking skills of students in Indonesia are still in the low to moderate category, especially in terms of flexibility, originality, and elaboration of ideas (Yasiro et al., 2021; Sari & Montessori, 2021). This condition is partly due to learning practices that are still dominated by traditional and teacher-centred approaches, thereby limiting the space for students to explore ideas and express their creativity (Yasa et al., 2023; Utami et al., 2023). This fact is also reflected in the results of the 2024–2025 Education Report Card for several primary schools in Klaten Regency. SDN 1 Ngemplak, for example, experienced a decline in creative thinking scores from 72.63 to 63.45, while SDN 2 Krajan showed moderate achievement with a score of 56.52. These data indicate that there is still a gap in the development of creative thinking among primary school students.

As one of the core subjects in primary school, Natural and Social Sciences (IPAS) has great potential to become a vehicle for developing students' creative thinking skills. The characteristics of IPAS learning require students to understand various natural and social phenomena through observation, questioning, environmental exploration, and contextual problem solving. Through this process, students are guided to relate scientific concepts to real-life experiences, thereby enabling the growth of creative, reflective, and innovative thinking skills. This learning approach is in line with the view that IPAS encourages students to generate new ideas, apply various strategies in solving problems, and develop innovative perspectives on natural and social phenomena (Zakarina et al., 2024).

In addition, IPAS learning also serves as a means of strengthening scientific thinking skills through integrated observation, experimentation, and environmental exploration activities, as emphasised in the Merdeka Curriculum policy (Kemendikbudristek, 2022). However, in practice, the potential of IPAS has not been optimally utilised in primary school learning. The learning process still tends to emphasise the mastery of factual concepts, so that the space for developing aspects of fluency, flexibility, originality, and elaboration of students' thinking has not been maximised.

Learning at the primary school level needs to be structured in such a way that students have ample opportunity to develop original, flexible and productive ways of thinking through active and meaningful learning experiences. Learning activities should

not only focus on mastering facts or memorisation, but also be directed towards strengthening higher-order thinking skills, including creativity and innovation, which are integrated into daily learning activities. The Creative Thinking framework in PISA released by the OECD emphasises that learning processes that provide space for idea exploration, open-ended problem solving, and reflection play an important role in fostering creative thinking skills from primary education onwards (OECD, 2025). Through this approach, students not only build a deeper understanding, but also grow in confidence in communicating and developing ideas.

These findings are in line with educational practices in various countries with advanced education systems, where the development of creative thinking skills from an early age has been proven to have a positive impact on students' readiness to face global challenges and 21st-century skill requirements. A number of international studies show that learning that places creativity as an important part of the learning process is associated with increased student engagement, adaptability, and readiness to face complex situations in the future (Beghetto & Kaufman, 2022; Foster & Schleicher, 2022). In the Indonesian context, the education policy through the Merdeka Curriculum also emphasises the importance of strengthening creativity and reasoning skills as part of the Pancasila Student Profile. This is realised through learner-centred learning and encouraging the exploration of ideas independently and through collaborative work (Kemendikbudristek, 2022).

Based on the above explanation, the development of creative thinking skills has become an integral part of primary school education, especially in facing the demands of 21st-century education, which emphasises high-level, adaptive, and innovative thinking skills. Although various studies have highlighted the importance of developing creative thinking skills, these studies are centered on the context of mathematics (Lasni, 2025). There is still limited research that specifically maps the actual condition of these skills in primary school students, particularly in the context of IPAS learning. Therefore, empirical studies are needed to reveal how the creative thinking skills profile of students is displayed in real learning practices as a basis for more contextual and effective learning planning.

In line with these needs, this study aims to describe the creative thinking skills profile of fifth-grade students at SDN 1 Ngemplak. Creative thinking skills in this study are understood as the ability to generate ideas fluently, diversely, originally, and in detail, which refer to four main indicators, namely fluency, flexibility, originality, and elaboration (Torrance, 1974; Torrance, 2008). These four indicators were used as the basis for analysis to map the factual conditions of students' creative thinking skills. The results of this study are expected to provide an empirical picture that is useful for teachers and education stakeholders in designing more contextual learning that is oriented towards the development of 21st-century competencies.

METHOD

This study utilises a qualitative descriptive approach with the aim of describing the creative thinking skills profile of students in Natural and Social Sciences (IPAS) learning. Theoretically, qualitative research is a method grounded in postpositivist philosophy, utilized to study objects in their natural conditions with the researcher acting as the key instrument (Sugiyono, 2022). This approach was chosen because it allows for an in-depth disclosure of the factual conditions of creative thinking skills based on data obtained naturally without special treatment. This study is a preliminary study focused on mapping the actual conditions as a basis for further research and learning improvement in the next stage (Creswell, 2021).

The research subjects were 15 fifth-grade students at SDN 1 Ngemplak, with 9 students selected through purposive sampling based on variations in high, medium,

and low academic abilities. This sampling technique is in accordance with Creswell (2018), who asserts that in qualitative studies, researchers purposely select individuals considered best equipped to provide information for understanding the central phenomenon under exploration The selection of these subjects aimed to obtain a comprehensive picture of the variations in students' creative thinking skills without intending to generalise. The research was conducted in the odd semester of the 2025/2026 academic year at SDN 1 Ngemplak, considering that this school has implemented IPAS learning in accordance with the Merdeka Curriculum and shows variations in creative thinking skills based on Education Report Card data.

Data collection was conducted through creative thinking skills tests, observation, and documentation. The test instruments were developed based on four indicators of creative thinking, namely fluency, flexibility, originality, and elaboration, referring to Torrance's framework (1974; 2008) and relevant previous studies (Said-Metwaly et al., 2020). Data analysis was conducted using descriptive qualitative methods by grouping the test results into the categories of excellent, good, fair, and poor based on the criteria of Sya'roni et al. (2020). The research procedure included the stages of planning, data collection, analysis, and conclusion drawing, which are systematically presented in Figure 1 as the research flow.

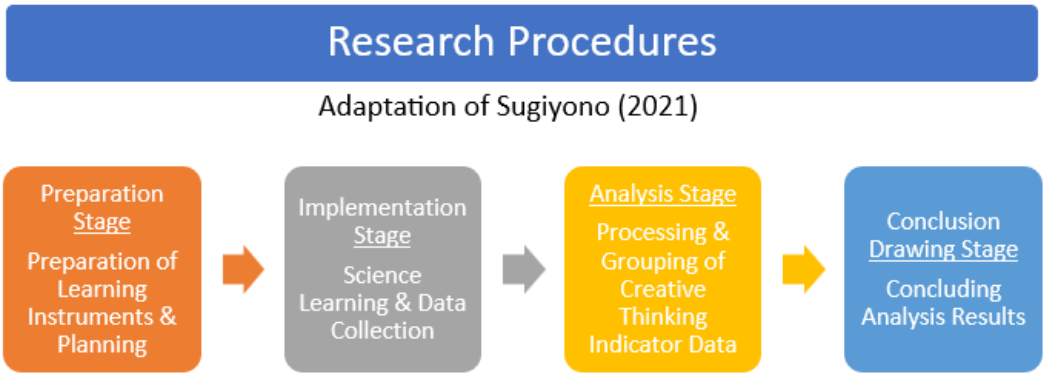

Figure 1. Research Flow

RESULT AND DISCUSSION

This study aims to describe the creative thinking skills profile of fifth-grade students at SDN 1 Ngemplak in Natural and Social Sciences (IPAS) learning. Data collection was conducted through creative thinking test instruments, observation, and documentation, so that the results obtained reflect the factual conditions of students' creative thinking skills as a whole. The test instrument assessed four indicators of creative thinking, namely fluency, flexibility, originality, and elaboration, while observation and documentation were used to verify the students' creative thinking behaviour in the learning process and interactions with friends.

The analysis results show that the fluency indicator achieved the highest score with a percentage of 78%, which is classified as good. This finding indicates that students are relatively capable of generating a number of ideas or answers in the context of IPAS learning discussions, especially when asked to explain how water moves in nature. Observations show that the majority of students actively gave many responses during class discussions. This finding is in line with the research by Inaya and Setiyawati (2024), which states that open discussion activities in science learning in primary schools can increase the quantity of students' responses, even though not all ideas show meaningful variation. The detailed scores for each student are presented in Table 1 below.

Table 1. Description of Fluency Indicators

Subject	S1	S2	S3	S4	S5	S6	S7	S8	S9
Score	4	4	3	4	3	4	3	4	3
Score Total	32								
Percentage (%)	78%								

The flexibility indicator obtained a percentage of 66.67%, which is classified as adequate. This result shows that students are able to provide several variations of answers. However, these variations tend to be limited to general ideas and do not show a strong change in perspective. Observations show that even though students try to provide different answers, many students still rely on familiar answer examples. This indicates that learning tends to be oriented towards a single type of answer or approach. This finding is in line with Hidayah et al. (2021), who stated that learning that is too structured and lacks room for exploration can hinder the development of creative thinking flexibility in primary school students. The detailed scores for each student are presented in Table 2 below.

Table 2. Description of Flexibility Indicators

Subject	S1	S2	S3	S4	S5	S6	S7	S8	S9
Score	3	3	2	3	3	2	3	2	3
Score Total	24								
Percentage (%)	66,67%								

Meanwhile, the originality indicator scored 44.44%, which is classified as low. This finding indicates that many students produced common ideas and showed little novelty. Documentation of students' work shows that the ideas that emerged were often similar among students and tended to follow the patterns of answers in textbooks or examples given by teachers. This finding is in line with the research by Selpiah and Fitriyani (2025), which revealed that the originality skills of primary school students are still low if learning does not provide opportunities for free exploration and the development of divergent thinking. Furthermore, Alfarisa et al. (2025) emphasise that learning that places too much emphasis on content mastery without accompanying creativity development strategies tends to produce conventional and less innovative ideas. The detailed scores for each student are presented in Table 3 below.

Table 3. Description of Originality Indicators

Subject	S1	S2	S3	S4	S5	S6	S7	S8	S9
Score	2	2	2	2	2	1	2	1	2
Score Total	16								
Percentage (%)	44,44%								

The elaboration indicator scored 58.33%, which is classified as poor. This result shows that students still have difficulty developing ideas in detail, especially in explaining the process, contributing factors, or impacts of the ideas proposed. Observations of discussion activities and project assignments show that students' explanations tend to be brief and lack depth. This finding is in line with Mutia Andini et al. (2023), who stated that elaboration skills need to be explicitly trained through learning activities that require students to explain, expand, and systematically relate ideas. The detailed scores for each student are presented in Table 4 below.

Table 4. Description of Elaboration Indicators

Subject	S1	S2	S3	S4	S5	S6	S7	S8	S9
Score	2	2	2	2	2	1	2	1	2
Score Total	16								
Percentage (%)	44,44%								

Overall, the recapitulation results show that the creative thinking ability of Grade V students is at 57%, which is classified as poor. This indicates that, although students are able to generate many ideas (fluency), they are still limited in generating original ideas, thinking from different perspectives (flexibility), and developing ideas in depth (elaboration). Observations and documentation reinforce the test findings, showing that teaching practices that are still teacher-centred and oriented towards single answers still limit students' exploration of creative ideas.

This discussion emphasises the importance of strengthening learning strategies that provide space for creative thinking, such as problem-based learning, project-based learning, and collaborative discussions. These strategies have been proven to improve creative thinking skills through more active, contextual, and reflective learning experiences (Sutrisno & Jazuli, 2022). In line with the focus of the Merdeka Curriculum, which emphasises learner-centred learning to improve higher-order thinking skills, the application of learning strategies that provide opportunities for free exploration and divergent responses is essential to improve the four indicators of creative thinking (Kemendikbudristek, 2023). Globally, this aligns with the perspective of Aguilar (2019), who asserts that a creativity-oriented learning environment at the elementary school level is highly essential for enhancing intellectual development and problem-solving skills. Furthermore, Beghetto (2023) emphasizes that creative thinking skills are not merely an academic supplement, but rather crucial 21st-century skills that equip learners to construct meaning in real-life contexts, which is highly consistent with the characteristics of Science and Social Studies (IPAS).

Based on the results of mapping the creative thinking skills profile in this study, it was found that the indicators of fluency and flexibility are the most dominant aspects largely mastered by the students. The students proved capable of generating numerous initial ideas (fluency) and responding to Science and Social Studies (IPAS) phenomena from several different perspectives (flexibility). The high level of mastery in these two indicators is driven by the inquiry-based and project-based learning climate that is being widely adopted. According to Calavia et al, (2021), when students are confronted with contextual environmental or social issues that are close to their daily lives, they naturally find it easier to produce a multitude of basic ideas (brainstorming) because the topics are relevant to their empirical experiences. Good fluency and flexibility skills contribute to the development of cognitive flexibility. Consequently, students become less rigid in facing problems and exhibit better academic resilience when their initial ideas fail.

On the other hand, the findings of this study also reveal that the indicators of originality and elaboration remain in the low category. The ideas expressed by the students predominantly tend to imitate textbooks or teacher explanations and have not yet been elaborated into systematic and detailed problem-solving steps. This discrepancy is a common phenomenon encountered in primary education. Hu et al, (2024) explain that generating original thoughts requires learners to break existing cognitive norms, a process that demands a significantly higher cognitive load compared to mere fluency. Furthermore, Ucus (2018), in a study on science and social studies education, found that low elaboration and originality are frequently caused by students' lack of familiarity with fully open-ended evaluation instruments. Teachers still tend to focus on final outcomes and rarely provide the scaffolding necessary to prompt

students to detail their answers. The lack of elaboration and originality skills will hinder the actualization stage of students' creativity.

Therefore, these findings suggest the need for further pedagogical intervention. To balance these four indicators, educators need to provide greater tolerance for ambiguity in the classroom, as well as familiarize students with higher-order trigger questions that specifically challenge the detail (elaboration) and uniqueness (originality) of their ideas.

CONCLUSION

Based on the research findings, it can be concluded that the overall creative thinking skills profile of fifth-grade students at SDN 1 Ngemplak in Science and Social Studies (IPAS) learning is still in the low category, with an overall achievement of 57%. Regarding the specific indicators, fluency achieved the highest score of 78%, followed by flexibility at 66.67%. However, the indicators of originality and elaboration remain in the low category, with an achievement of 44.44%. This indicates that while students are capable of generating a large number of ideas, they are not yet optimal in terms of the novelty and in-depth elaboration of these concepts. Consequently, these findings underscore the necessity of strengthening IPAS instructional strategies to provide ample room for exploration, encourage divergent thinking, and comprehensively stimulate students' creativity.

The results of this study imply that IPAS learning in primary schools needs to be directed not only at mastering concepts, but also at developing comprehensive creative thinking skills. Teachers need to design learning activities that provide space for students to explore ideas freely, propose various alternative solutions, and develop ideas in depth. The implementation of learner-centred learning, such as problem-based learning, project-based learning, and collaborative discussions, is important to encourage divergent thinking and improve the quality of ideas produced by students, in line with the demands of the Merdeka Curriculum and the strengthening of 21st-century skills.

Based on the research findings, it is recommended that IPAS teachers integrate learning strategies that explicitly train the four indicators of creative thinking, particularly originality and elaboration, through open-ended tasks, contextual projects, and high-level sparking questions. Schools are expected to support the development of creative learning by providing supporting facilities and improving teacher competence. In addition, future researchers are advised to develop and test innovative learning models that focus on improving the creative thinking skills of primary school students, as well as using broader subjects and contexts so that the research results have stronger generalisation power.

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