

Developing Primary School Students' Creative Thinking Via Instruction in The Subject of Nature and Society

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ABSTRACT: Creative thinking is recognized as a core competency in 21st-century education and a central objective of Vietnam's 2018 General Education Curriculum. At the primary level, the subject "Nature and Society," characterized by its integrated and practice-oriented nature, offers a favorable context for fostering students' creative thinking. This article examines and analyzes four pedagogical measures aimed at developing creative thinking among primary school students in the teaching of Nature and Society. These measures include: (1) organizing exploratory and inquiry-based activities, (2) implementing small-scale project-based learning, and (3) designing experiential and real-world discovery activities. Grounded in constructivist theory and the sociocultural approach to learning, and informed by a synthesis of international research, the article argues that these strategies not only enhance the quality of subject learning but also help create a positive learning environment in which students are encouraged to think freely, propose ideas, and develop creative solutions. The findings provide both theoretical underpinnings and practical implications for teachers, schools, and curriculum designers in their efforts to cultivate creative thinking in primary education.

KEYWORDS: developing; primary students; creative thinking; primary education; Natural and Social

I. INTRODUCTION

In the context of globalization and rapid advancements in science and technology, creative thinking has become one of the essential competencies of the 21st century and should be cultivated from general education levels. According to Guilford (1950), creative thinking is the ability to generate novel, unique, and contextually appropriate ideas—an advanced form of human intelligence [3]. Williams (1970) identified core components of creative thinking, including fluency, flexibility, originality, and elaboration [1] while Ruggiero (1998) emphasized that it is a mental process that enables individuals to generate meaningful solutions and make purposeful decisions [8]. Creative thinking is not merely a product of intelligence but a cognitive process that can be developed through education [4]. In modern education, creative thinking is regarded as a pillar of higher-order thinking skills, which supports learners in effective problem-solving, adaptive responses to real-life contexts, and the creation of new values for both individuals and. Creativity-oriented education requires teachers to design open-ended learning activities that encourage students to move beyond conventional patterns. In doing so, students are motivated to form novel connections between their knowledge and personal experiences. Marzano (2003) asserted that an effective lesson is one in which students are engaged in forming hypotheses, using nonverbal imagery, and seeking relationships—core elements of the creative thinking process [6]. Beyond improving learning outcomes, creative thinking also fosters social responsibility, as learners are guided to apply their creativity for the benefit of the broader community. Therefore, integrating creative thinking into classroom instruction must be considered a vital responsibility of contemporary schools.

The subject "Nature and Society" in primary education is an integrated domain with great potential for fostering students' creative thinking. With its content closely linked to real-life contexts, this subject provides opportunities for students to observe, explore, explain phenomena, and propose innovative solutions. When students engage in experiential and inquiry-based learning activities, they do not merely acquire knowledge passively; rather, they actively construct new ideas and flexibly apply them to specific contexts. This approach aligns with the perspective of Bowers (1995), who asserted that creative thinking education should address both personal values and social responsibility [1]. Based on these foundations, this article proposes and analyzes several pedagogical measures for promoting creative thinking among primary school students through the teaching of Nature and Society. These measures aim to enhance instructional quality and contribute to the formation of key competencies and essential learner attributes in the context of ongoing educational reform.

II. METHODOLOGY

This study adopts a theoretical analysis approach as the sole research method, aiming to systematize and evaluate various approaches, principles, and strategies for fostering creative thinking in primary school students, particularly within the context of teaching the subject Nature and Society as framed by the 2018 General Education Curriculum in Vietnam.

III. FINDINGS

A. Organizing exploratory and inquiry-based activities

Purpose of The Strategy

The organization of exploratory and inquiry-based activities plays a pivotal role in developing creative thinking among primary school students. These activities strongly stimulate divergent thinking—a foundational component of creativity. Through participation in such activities, students are encouraged to ask questions, observe phenomena, conduct experiments, and propose multiple hypotheses or alternative solutions. This process enhances fluency—the ability to generate a large number of ideas in a short time—and flexibility—the capacity to approach problems from different perspectives. In addition, exploratory activities nurture curiosity and intrinsic motivation, thereby fostering personal forms of creativity. Furthermore, self-guided exploration promotes students' skills in reasoning, explanation, and argumentation—advanced manifestations of creative thinking—and builds self-directed learning competence, a critical attribute in contemporary education. It can be concluded that engaging students in exploration and inquiry not only nurtures their creative capacity in academic settings but also cultivates autonomy, adaptability, and problem-solving abilities essential for life.

Implementation Procedure

This pedagogical strategy is implemented through the following sequence of steps:

Step 1. Create a problem-based introductory situation:

The teacher activates students' thinking with thought-provoking questions (e.g., "Why is it daytime in Vietnam while it is nighttime in the United States at the same moment?"), combined with visual aids such as time-lapse videos of sunrise and sunset across different time zones.

Step 2. Organize observation – exploration – question generation:

Students observe a solar system model (or an interactive video), take notes on the Earth's characteristics, and are encouraged to raise questions. The teacher supports the process by suggesting question prompts such as "Why...?", "What if...?", "Is there another way to explain...?"

Step 3. Model-based hands-on exploration and creative explanation:

Students manipulate a globe and flashlight (representing the Sun) to explore the Earth's rotation and revolution mechanisms. Each group creates visual diagrams and formulates simplified explanations for the day–night phenomenon based on their understanding.

Step 4. Assign open-ended thinking tasks:

Students are given creative tasks such as: "Imagine the Earth stopped rotating—what would happen?" or "Draw a sequence of events in your day if you lived on a planet with perpetual sunlight." These activities stimulate imagination, reasoning, and the reconstruction of novel scenarios, which are core elements of creative thinking.

Step 5. Present and respond to ideas:

Groups present their exploratory products in the form of illustrated drawings, models, or diagrams, accompanied by brief oral explanations. Teachers and peers provide constructive feedback, fostering a psychologically safe environment that encourages students to express unconventional views and present creative solutions.

Illustrative Example

Topic/Lesson: The Earth in the Solar System (Grade 3 – Nature and Society)

Learning Objective: Students are able to explain the phenomenon of day and night at a basic level through the use of models or videos.

Organization of learning activities to develop creative thinking:

Step 1. Initiate a creative scenario:

The teacher presents a short real-time simulation video showing sunrise in Vietnam occurring simultaneously with nighttime in another country (e.g., a video call between two people living in distant countries). The teacher poses a stimulating question: "Why is it that at the same moment, one place has sunlight while another is in darkness?"

Step 2. Exploration using a model:

Students work in groups, each equipped with a simple model consisting of:

A globe (or a ball marked with Vietnam);

A flashlight representing the Sun.

Students take turns performing the activity: one student holds the "Sun" (flashlight) and shines it on the globe while another rotates the globe on its axis. The group observes how illuminated and shaded areas change as the Earth rotates.

Developing Primary School Students' Creative Thinking Via Instruction in The Subject of Nature and Society

Step 3. Explaining the phenomenon:

After the observation, students respond to guiding questions such as:

Why do day and night occur?

What would happen if the Earth rotated faster?

Groups present their responses through:

- Short verbal explanations;
- Imaginative scenario descriptions (e.g., "If the Earth did not rotate...").

Step 4. Creative activity:

Students are assigned an open-ended task:

"Imagine we live on a planet that never experiences nighttime. What would you do during 24 hours of continuous daylight?"

This activity not only checks scientific understanding but also stimulates imagination, explanatory ability, and the application of knowledge in new contexts—capturing the essence of creative thinking.

Step 5. Presentation and evaluation:

Groups present their explanations and creative products. The teacher provides constructive feedback using a creativity assessment rubric based on three criteria: logical coherence, originality, and expressive clarity.

B. Mini Project-based learning

Purpose of The Strategy

Mini project-based learning is designed to enable students to apply knowledge to real-life contexts by engaging in meaningful, integrated tasks that involve inquiry, experience, and creativity. This strategy simultaneously fosters problem-solving competence, creative thinking, collaboration, communication, and presentation skills. At the primary education level, projects should be concise, age-appropriate, and linked to familiar themes such as living environment, health, family, and community. Through project activities, students are encouraged to generate their own ideas, choose implementation methods, and express their ideas through diverse products such as drawings, models, short videos, or skits. This learning environment is highly conducive to the development of creative thinking.

Implementation Procedure

To implement mini project-based learning effectively in the Nature and Society subject, teachers can follow these steps:

Step 1. Select a topic and define project tasks:

The topic should be relevant to the curriculum (e.g., environmental protection, personal health care, traffic safety), practical in nature, and open-ended to encourage exploration and creativity. The teacher presents a problem-based scenario and assigns tasks to student groups.

Step 2. Organize student groups and plan the project:

Students work in small groups (3–5 members), engage in discussion, and develop a project plan, including objectives, division of tasks, timeline, and format of the final product.

Step 3. Execute the project:

Students search for information, conduct real-world observations (if applicable), gather images, brainstorm designs, and create models, diagrams, or slogans. The teacher supports the technical process and encourages original, student-generated ideas.

Step 4. Present products and provide feedback:

Groups display their products (on the classroom board, in hallways, or as digital slides) and present their ideas. Other groups and the teacher ask questions and offer constructive feedback.

Step 5. Evaluate and extend the project:

The teacher evaluates both process and product using specific criteria (content accuracy, creativity, presentation quality, teamwork). The project may be extended by inviting parents or students from other classes to visit, observe, and discuss the outcomes.

Illustrative Example

Topic: School

Learning Objectives: Students identify several actions that contribute to environmental protection; perform appropriate behaviors to help protect their living environment and community.

Title of the mini project: Our Green and Clean School

Project Activities:

Step 1. Select the topic and define project tasks:

The teacher presents a real-world problem: the schoolyard has recently become littered due to improper waste disposal by students. The teacher poses a trigger question:

"What can we do to make our school greener, cleaner, and more beautiful in the most creative way possible?"

Developing Primary School Students' Creative Thinking Via Instruction in The Subject of Nature and Society

The teacher then introduces several task options for students to choose from:

Task 1: Design a smart trash bin using recycled materials (draw a model or build a prototype if possible).

Task 2: Create a slogan and draw a poster promoting environmental protection to be displayed in class.

Task 3: Write and perform a short play about protecting the school environment.

Task 4: Create a short video recording positive environmental actions (e.g., cleaning the campus, caring for plants).

Step 2. Organize student groups and plan the project:

Students work in small groups (3–5 members), engage in discussion, and prepare a plan that includes objectives, division of responsibilities, timeline, and format of the product.

Step 3. Implement the project:

Students gather information, observe real situations (if possible), collect images, brainstorm design ideas, and create models, posters, or slogans. The teacher supports technical execution and encourages the expression of students' unique creative ideas.

Step 4. Present products and receive feedback:

Groups display their work (on classroom boards, hallways, or slides) and present their concepts. Other groups and the teacher ask questions, offer comments, and provide positive feedback.

Step 5. Evaluate and expand the project:

The teacher evaluates both the process and final product based on criteria such as content relevance, creativity, presentation, and teamwork. The project may be extended by inviting parents or students from other classes to visit, view, and discuss the outcomes.

C. Designing experiential and real-world discovery activities

Purpose of The Strategy

Designing experiential and real-world discovery activities plays a vital role in fostering creative thinking among primary school students, as this form of learning is closely tied to real-life contexts and helps transform abstract knowledge into vivid, lived experiences. Through open-ended learning situations such as environmental investigations, participation in community-based projects, or solving practical problems, students are encouraged to observe independently, ask questions, analyze data, and propose solutions. These activities not only promote flexibility by enabling students to explore multiple approaches to a single problem, but also foster originality through the generation of novel and unique ideas. Moreover, real-world experiences cultivate students' independence, willingness to experiment, and confidence in overcoming the fear of making mistakes—an obstacle often hindering creative development. When students perceive personal meaning in their learning and recognize the practical value of knowledge, their intrinsic motivation and passion for discovery are naturally reinforced. In addition, such experiences develop foundational skills such as collaboration, critical thinking, and self-assessment, which are integral components of comprehensive creative thinking competence. Therefore, experiential learning and real-world exploration should be regarded as essential instructional strategies for promoting creativity in learners.

Implementation Procedure

Experiential and real-world discovery activities can be designed and implemented through the following steps:

Step 1. Define the objectives and content of the experience:

The teacher selects a lesson topic with strong real-world connections, such as the living environment, plants and animals, production activities, or local historical sites. The topic should align with the curriculum and ensure student safety.

Step 2. Prepare for the experience:

Students are assigned preparatory tasks, including formulating questions, preparing observation notebooks, worksheets, and recording tools (if available). The teacher provides guidance on observation techniques, questioning strategies, information gathering, and teamwork.

Step 3. Conduct the experience – exploration phase:

Activities may take place outside the classroom (e.g., visiting farms, museums, residential areas) or within the classroom (e.g., inviting guest speakers, using real objects or models, role-playing scenarios). During the experience, students are encouraged to:

- Observe actively;
- Identify new or unusual features;
- Ask questions and share personal insights.

Step 4. Post-experience processing:

Students work in groups to synthesize information, provide explanations, and present their findings using visual aids such as diagrams, drawings, models, oral presentations, or written reports. The teacher facilitates discussion, encourages students to propose initiatives related to the experience.

Step 5. Evaluate and extend:

The teacher uses a rubric to assess the process and creative products, based on criteria such as originality, real-world relevance, and application of learned knowledge.

Developing Primary School Students' Creative Thinking Via Instruction in The Subject of Nature and Society

The project may be extended by involving parents or community members to share experiences, thereby increasing student engagement and motivation.

Illustrative Example

Step 1. Define the objectives and content of the experience:

Lesson topic: Local production activities

Learning objectives: Students identify key types of production activities in their locality and describe the roles these activities play in the lives of local people.

Experiential activity: Field trip to a local incense-making village or an organic vegetable production facility.

Step 2. Preparation before the experience:

The teacher shows a short video clip about local production activities and then assigns the task:

“During the visit, observe and record the following: (1) What is the main production activity? (2) How do people carry out their work? (3) What do you find interesting or surprising?”

Step 3. Conduct the experience – exploration phase:

Students participate in the site visit, take photos/videos, and (if appropriate) conduct simple interviews with workers about the production process, its benefits, and challenges.

The teacher accompanies the students, providing guidance on observation and questioning aligned with the learning goals.

Step 4. Post-experience processing:

Students create a diagram describing the production process; write a short reflection titled “What I learned from the field trip”; and design slogans promoting green and clean production.

Some groups creatively perform short skits based on the theme “A Day in the Life of a Worker.”

Additional creative outputs may include:

Proposing improved production models (e.g., growing vegetables in recycled plastic bottles)

Formulating interdisciplinary questions such as “How does clean production benefit human health?”

Observing and identifying new details and making connections between real-life observations and classroom content.

Step 5. Evaluation and extension:

The teacher uses a rubric to assess the learning process and creative products.

Students participate in peer assessment using a clearly described set of criteria.

Criteria	Level 1: Not Yet Achieved	Level 2: Achieved	Level 3: Well Achieved – Creative
Accurate documentation of real-world observations	Observations are superficial; information is incomplete or inaccurate	Correctly documents production steps, includes clear descriptions of workers and tools	Detailed and comprehensive notes, with diagrams/illustrations; identifies unique or novel aspects
Personal re-description using own words	Descriptions are copied, rigid, or unclear	Re-describes the experience vividly and clearly, showing personal understanding	Creative retelling, includes personal connections, examples, or varied visual representations
Creation of slogans or skits	No product submitted or copied product lacking originality	Slogans have rhythm; skits include simple, understandable situations	Unique and emotionally engaging slogans/skits with creative expression and strong inspirational impact
Proposal of improvement ideas	No ideas presented or ideas are irrelevant	Clear suggestions (e.g., waste sorting, growing vegetables in recycled bottles)	Feasible and expansive proposals (linked to environment, health, technology, energy-saving, etc.)
Group presentation and feedback	Did not participate or showed no understanding of the group's work	Presents fluently, collaborates well, responds to teacher/peer questions	Engaging presentation with creative delivery; responds naturally; makes practical connections or extends the topic

IV. DISCUSSION

The results of theoretical analysis indicate that pedagogical measures such as exploratory inquiry, mini project-based learning, real-world experiential activities, and creativity-oriented formative assessment significantly contribute to the development of

Developing Primary School Students' Creative Thinking Via Instruction in The Subject of Nature and Society

creative thinking in primary school students, particularly in the context of teaching the subject Nature and Society. Firstly, exploratory and inquiry-based activities stimulate active learning by encouraging students to ask questions, investigate, and construct explanations in their own ways. This aligns with Vygotsky's (1978) sociocultural theory, which emphasizes that cognitive development is most robust within the "zone of proximal development"—a space where learners are supported but remain central agents in knowledge construction [11]. Consistently, Runco and Acar (2012) assert that exposing students to open-ended questions is an effective way to foster multidimensional creative thinking [9]. Secondly, mini project-based learning provides opportunities for students to engage in the construction of learning products, thereby developing collaboration, problem-solving, and creativity. Thomas (2000) highlighted that project-rich environments have a lasting impact on students' independent and creative thinking [10]. In the Vietnamese context, Nguyen Thi Truc Minh (2022) also proposed integrated learning projects as a practical approach to enhancing creativity in primary classrooms [7]. Thirdly, experiential and real-world discovery activities serve as a crucial bridge between academic knowledge and everyday life. These activities empower students to transform abstract knowledge into meaningful, creative actions. As Dewey (1938) and Kolb (1984) emphasized, experience is not only a foundation for knowledge acquisition but also a catalyst for creative thought and development [2], [5]. Overall, the proposed instructional strategies offer both theoretical significance and practical applicability. They contribute to realizing the goals of the 2018 General Education Curriculum in Vietnam, which emphasizes the holistic development of students' qualities and competencies, including creative thinking.

V. CONCLUSION

Fostering creative thinking is a core orientation in modern education, particularly in the context of implementing Vietnam's 2018 General Education Curriculum. Based on theoretical analysis, this study has synthesized and clarified four key pedagogical measures capable of promoting creative thinking among primary school students through the subject Nature and Society, including: (1) organizing exploratory and inquiry-based activities, (2) implementing mini project-based learning, and (3) designing experiential and real-world discovery activities. These strategies are not only developmentally appropriate for the cognitive and psychological characteristics of primary students but are also theoretically grounded and highly applicable in practice. The flexible application of these measures can help create a positive learning environment where students actively engage with knowledge, are encouraged to express individual ideas, produce diverse learning outcomes, and develop real-world problem-solving competencies. The findings contribute to the theoretical foundation for competency-based instruction in Nature and Society, while also offering pedagogical implications for renewing teaching practices in primary education.

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