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## TRAINING CREATIVE THINKING FOR PRIMARY SCHOOL STUDENTS WITH THE APPROACH OF LEARNING THROUGH PLAYING

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### ABSTRACT

In the educational orientation of competence development of Vietnam's General Education Program 2018, creative thinking plays an important role, especially at the primary school level. Creative thinking is a key factor for students to develop problem-solving abilities in real life. The formation and development of creative thinking competence are to help students have the habit of independent thinking, creating new and unique ideas with high efficiency in problem-solving. The article approaches to analyze the characteristics of creative thinking in primary school students and the point of view of teaching according to the learning through playing approach, thereby determining the appropriate relationship when organizing teaching activities to improve the quality of creative thinking training for primary school students to meet the goals and requirements of the General Education Program 2018 of Vietnam.

**KEYWORDS:** Creative thinking, problem-solving, learning through playing, primary school students, competence, teaching.

### INTRODUCTION

Thinking is a higher-order cognitive activity taking place in the human psyche. The physiological basis of thinking is the activity of the cerebral cortex, which is an intellectual activity directed at identifying solutions to solve situations. Creative thinking is always associated with the creation of new things (Vietnam Psycho-Education Association, 1997), is the process of human activities that create spiritual and new material values (Guilford J.P., 1979). Creative thinking is characterized by basic components, such as flexibility, fluency, originality, elaboration, and problemsensibility (Loowenfeld, 1962). In particular, the above characteristics of creative thinking are not separate from each other, but they are closely related and complement each other, in which originality is said to be the most important in creative expression, problemsensibility of problems associated with the mechanism of creative appearance. Flexibility and fluency are the basis for being able to achieve originality, problemsensibility, elaboration and perfection.

In teaching at primary school, the training of creative thinking for students is considered to play an important role (Kaufman & Beghetto, 2009; Leikin & Sriraman, 2017). In order to develop creative thinking, it is necessary to have effects to evoke and form the qualities and attributes of creative personality for students, to stimulate and spark the imagination, and overcome the ruts in thinking to create the necessary conditions to develop creative thinking.

The creative thinking of primary school students is in the formative stage at the beginning and gradually perfected at the end of primary school. The change in the relationship between concrete, intuitive thinking and abstract thinking prevails at the end of primary school. The process of classification, comparison, generalization, and inference takes place more often. This creates basic advantages for teachers in designing and organizing teaching activities based on problem solving, thereby aiming to develop students' creative thinking ability.

Learning through playing is an approach to education in which students interact, experience, explore and solve problems in a fun learning environment. Teachers connect learning goals with activities to promote student participation and autonomy, thereby developing their qualities and competencies (Thomsen, 2019; VVOB, 2021). The word "Play" is not just games or activities, but is understood in the sense of discovery and problem-solving. Through Learning through playing, students will become independent, self-directed, socially engaged, creative, adaptable to all situations and have good problem-solving abilities (Briggs & Hansen, 2012). Learning through playing will create opportunities for learners to develop comprehensively in cognitive, creative thinking, emotional, social and physical skills. Many researchers also point out the role of learning through playing in the development of cognitive thinking as well as creative thinking in primary school students (Guilford J.P, 1979; Schoevers et al., 2019; Siraj-Blatchford et al., 2002): Playing contributes to the development of foundational skills and knowledge, including supporting the learning of reading, writing, math and science (Thomsen, 2019); Through experimenting, observing, and comparing to learn about nuances, sizes and quantities, children will form the basis for understanding math, science and higher-order thinking (Fleer, 2013); Playing leads to better results in the cognitive-language and in the social-emotional domains. Playing also affects originality of thought, flexibility in association, empathy associated with cooperative behavior, and social skills (Fisher, 1992). Therefore, learning through playing is an approach with many advantages in creating opportunities for learners to practice and develop themselves.

Learning through playing is implemented in association with five basic characteristics: pleasure, meaningfulness, active participation, social interaction, and opportunities for experimentation (iteration). Playing is always influenced by factors of learning environment, friends, available materials... Learning through playing has 3 basic types: free play, guided play and game.

**Research Questions:**

The purpose of the article is to analyze the manifestations of creative thinking in primary school students and the types of the learning through playing approach to answer the research question: What

are solutions to design and organize teaching activities in primary schools to develop creative thinking for students through the approach of learning through playing? After that, a number of teaching cases built in association with the program and the practical context of Vietnam are presented to illustrate the proposed solutions.

## **2. Levels of expression of creative thinking in primary school students**

There are different points of view when it comes to differentiating levels of creativity. Nguyen Huy Tu - a psychologist in Vietnam has divided creativity into five levels (Nguyen Huy Tu, 1996). In this study, we follow his point of view and divide the expression of creative thinking in primary school students according to the following basic levels:

+ Expressive creativity is the most basic level of creativity that does not require any important skills. Characteristic of this level of creativity is a spontaneous “excitement”. For example, when teaching students about some ways to purify water (Science 4), the teacher organizes for students to do a water purification experiment with the following items: Turbid water; two equal and clear plastic bottles; filter paper; sand and coal powder. Students can immediately practice experiments on the basis of pouring sand, coal powder and filter paper into plastic bottles happily without worrying about how to put the ingredients in that order. This is based on a “trial and error” operation to find the right solution (Ministry of Education and Training, 2018).

+ Creative creativity is a higher level of creativity than expressive creativity. It requires certain skills (information processing skills or technical skills). To this extent, rules substitute for spontaneity in the expression of the creator's ego. For example, in the above water purification experiment, before students do the water purification experiment, they discover that the mouth of the plastic bottle was quite small and they had to think, shape, and cut the water bottle to be easy to put the materials into the experiment.

+ Initiative creativity is the proposal of initiative or innovation. It is characterized by the discovery of new relationships based on the previous arrangement of information. For example, in the above experiment, students have to compare the order of arrangement of materials such as coal powder, filter paper, sand, so that water can be filtered more purely instead of just pouring other materials into plastic bottles at random.

+ Innovative creativity is a high level of creativity. It demonstrates a deep understanding of scientific or technical knowledge. The construction of ideas requires a certain intellectual level of the subject. For example, in the above water purification experiment, although there is no gravel in the prepared material, when doing it, some students discover that in the family of their parents, they still use gravel and sacks to line the tank when filtering water in daily life, from which children can form the idea of using sacks to replace filter paper, using washed gravel to increase the purity of filtered water.

+ Inventive creativity is the highest level of creativity. It is characterized by creating completely new material or spiritual products, and unprecedented ways of acting in experience. This is the level of

creativity found in scientists and inventors such as Einstein in physics, Picasso in art, Darwin in biology, Ho Chi Minh in social and political science. This level of creativity is often absent and very rarely seen in primary school students.

In teaching at primary school, students' creative thinking is mainly expressed at levels 1, 2 and 3. Level 4 can be formed and appear more at the end of the school level due to scientific knowledge and rich student life experiences. Teachers in science have an important role when designing and organizing activities to stimulate students' habits of logical thinking, comparison, imagination, and relating what they have to form solutions to solve learning situations and apply them to real life.

### **3. Cultivate creative thinking for primary school students through different types of learning with the approach of learning through playing**

#### ***3.1. Design learning activities in the type of free play***

This is a type of “play” entirely initiated, organized and controlled by students without the participation of teachers. With free play, students will learn, play and discover new things on their own, create their own play, solve their own problems without the constraints of time and limitations attached to requirements. The type of free play often appears during recess, when students freely propose and create their own ways of playing, through which they also draw their own playing experiences and knowledge from friends, build their own treasure trove of experience.

In the classroom space, teachers can also stimulate students' creative thinking when designing and arranging learning materials and means to create opportunities for students to be creative and form many ideas in the middle of class breaks or during practice activities and practice sessions. For example, teachers can put some potted plants and flowers on the classroom window when students learn about the topic of Plants; prepare some materials and tools to arouse curiosity and place them in the Science Discovery corner of the class.... At recess or in group activities, students can observe classroom objects to discover and quiz each other, perform manipulations, act of discovery, "play" on those media. This can create motivation for students to explore and think creatively.

#### ***3.2. Design learning activities in the form of guided play***

This type is actively implemented by students, teachers only support, guide and help them control their learning process. Teachers can help by setting up a play environment, participating in play with students, asking questions, suggesting, giving examples... With guided play, teachers can help students have a variety of learning experiences with specific learning goals. The word "play" here is understood in the sense that students have the opportunity to explore, discover and solve problems in fun and active participation, the word "guided" is understood as an orientation by ways to raise problems and lead students to solve tasks associated with learning goals.

To train students' creative thinking, teachers can organize play activities in the following directions:

- Stimulating creative imagination for students through images, simulation models, recreating phenomena and things in nature and society to evoke associations, connect with knowledge, practical experience that students already have. For example, a landscape picture for students to imagine, mobilize their senses when writing a description, a model of a water purifier when students learn about some ways to purify water, a diagram model of a battle when students learn about history....
- Create opportunities for students to "iterate" through "trial-and-error" operations with a learning process that raises problem situations containing contradictions → prediction → experiment → propose solutions → scientific conclusions. For example, learning about the properties of air, the teacher gives a problem: "Is air a matter? Let's take an air bag and show that there is air in it". The teacher organizes students to work in groups, write and draw how to propose implementation and predict results. Students conduct an experiment to test their predictions. If they are correct, they can answer the teacher's question. If they are wrong, they can look back at their group's performance and compare with other groups to adjust the way it is done and try new solutions and draw conclusions.
- Regularly ask questions that prompt, motivate and encourage students to develop flexibility, fluency and originality of thinking. Help students see that when analyzing a problem, an object, or a perceived object, it is necessary to have a multi-dimensional and comprehensive view. Train students to recognize the reasonableness of the answer or the process of reasoning and problem-solving. In the process of students "play" to perform learning tasks, teachers need to encourage students to get into the habit of not accepting a familiar or unique way of doing things, asking inferential questions to expand, continue to research and study the knowledge of the lesson. For example, after learning the opening and closing structure in writing, students can continue to reflect on other ways of opening and closing the lesson; After learning about the mathematical knowledge "midpoint of a line segment", students can learn how to apply this knowledge in practice, relate and model the seesaw... .

### ***3.3. Design learning activities in the type of game***

Game is a pre-designed type with rules and regulations, but students still have fun while playing. There are games where the rules are universal, appearing with a common standard such as Tangrams, Sudoku, Uno, chess, card games, educational programmed games (like Scratch) and educational apps (like Kahoot)... There are games that teachers or students design and build by themselves.

Organizing games in teaching at primary schools is one of the measures to innovate teaching methods, increase the attractiveness of lessons and attract active participation in students. Games, when used in elementary school classes, must both ensure the effectiveness associated with the lesson objectives, ensure the development of students' qualities and abilities, and ensure the "playability" of the games.

There are different types of games used in teaching in primary schools, many of which play the role of stimulating and promoting students' creative thinking. For example, in the game of expressing content through body language, with their creativity, students must use body language to convey lesson content such as: expressing jobs for other students to guess the job (Natural and Social subject,

Experiential activity), facial expressions for other students to guess the character's name (Vietnamese subject), hold up a color card to express attitude, role play (Ethics), picture quizzes, language (in all primary school subjects)...

Primary school games can be held individually or in groups, in the classroom or out of the classroom. However, teachers need to create opportunities for students to analyze, compare and generalize after playing by asking a system of questions such as: How can you and your friends win the game? Which friend/team made the most impressive game? What did you learn from this game? What message do you want to tell everyone after participating in the game?..... With this question system, teachers not only create opportunities for students to practice and develop creative thinking in the process of participating in the implementation of the game, but also have the opportunity to see and evaluate to draw experiences and lessons after playing the game.

## CONCLUSION

In the classroom, the most important resource is the teacher and the student, diversity and positive interaction in the classroom is an opportunity for creativity to flourish (Lefever S., 2016; Tran Hoai Phuong, 2018). Learning through playing is an educational approach that can be exploited and used in teaching many subjects and educational activities in primary schools. This approach creates opportunities for primary students to engage in learning activities that are intuitive, fun, and engaging. Students' creativity can be realized through all three types of play with diverse forms, suitable for the characteristics of the lesson as well as the student. Suggestions on how to develop students' creative thinking with the approach of learning through playing proposed by the authors above are considered as a teaching "strategy" for teachers in teaching and developing creative thinking skills and problem-solving skills for students, contributing to the successful implementation of the General Education Program 2018 in the direction of developing students' quality and competence in Vietnam.

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