IN ENGLISHDEVELOPMENT DYNAMICS OF CREATIVE THINKING AND METACOGNITIVE AWARENESS: AGE-PSYCHOLOGICAL ANALYSIS

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Abstract

This thesis analyzes the development dynamics of creative thinking and metacognitive awareness from an age-psychological perspective. During the development of human thinking, the ability for creative thinking and awareness of one's own cognitive processes is gradually formed. Especially during adolescence and early youth, abstract thinking, reflection, independent thinking, and self-regulation mechanisms actively develop. The study also analyzes the characteristics of creative thinking and metacognitive awareness development at different age stages, their interrelationship, and psychological mechanisms.

Keywords: creative thinking, metacognitive awareness, age-psychological development, reflection, abstract thinking, cognitive development, creativity, self-regulation, adolescence, early youth.

ДИНАМИКА РАЗВИТИЯ КРЕАТИВНОГО МЫШЛЕНИЯ И МЕТАКОГНИТИВНОГО СОЗНАНИЯ: ВОЗРАСТНО-ПСИХОЛОГИЧЕСКИЙ АНАЛИЗ

Аннотация

В данной тезисной работе анализируется динамика развития креативного мышления и метакогнитивного сознания с возрастно-психологической точки зрения. В процессе развития мышления человека способность к креативному мышлению и осознанию собственных когнитивных процессов формируется постепенно. Особенно в подростковом и юношеском возрасте активно развиваются абстрактное мышление, рефлексия, самостоятельное мышление и механизмы саморегуляции. Также анализируются особенности развития креативного мышления и метакогнитивного сознания на различных возрастных этапах, их взаимосвязь и психологические механизмы.

Ключевые слова: креативное мышление, метакогнитивное сознание, возрастно-психологическое развитие, рефлексия, абстрактное мышление, когнитивное развитие, творчество, саморегуляция, подростковый возраст, юношеский возраст.

The development of human thinking is a long-term psychological process, with specific characteristics emerging at each stage of age development. Creative thinking and metacognitive awareness also develop in close connection with a child's overall cognitive development.

Creative thinking refers to an individual's ability to generate new ideas, find unconventional solutions to problems, and apply existing knowledge in new situations. Metacognitive awareness, in turn, refers to an individual's ability to understand, monitor, and regulate their own thinking processes.

Across different age periods, the development of these processes is manifested in the following stages:

- during preschool age — imagination and figurative creativity develop;
- during primary school age — logical thinking and learning strategies are formed;
- during adolescence — reflection and abstract thinking develop;
- during late adolescence — independent thinking and metacognitive regulation become stronger.

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One of the scholars who scientifically investigated the problem of creative thinking was J. Guilford. He associated creativity with divergent thinking and identified fluency, flexibility, and originality as the main indicators of creative thinking.

E. Torrance regarded creative thinking as a psychological ability that can be developed. According to him, creativity develops through an individual's experience, motivation, and attitude toward problem situations.

J. Flavell is considered one of the founders of the theory of metacognitive development. He explained metacognitive awareness as an individual's knowledge of their own cognitive processes and the ability to regulate these processes.

In his theory of cognitive development, J. Piaget emphasized the formation of formal operational thinking during adolescence. At this stage, an individual becomes capable of working with abstract concepts, formulating hypotheses, and solving complex problems.

L. S. Vygotsky, in turn, associated the development of thinking with sociocultural experience. According to his view, a child's higher psychological functions are formed through social interaction and the educational process.

Table 1

Development of Creative Thinking and Metacognitive Awareness Across Different Age Stages

Age Period	Characteristics of Creative Thinking	Characteristics of Metacognitive Development
Preschool age (3–6 years)	Imagination, fantasy, and figurative creativity	Simple forms of self-evaluation
Primary school age (7–10 years)	Generating new ideas based on acquired knowledge	Monitoring of learning activities begins to develop
Adolescence (11–15 years)	Independent and abstract thinking develops	Reflection and evaluation of one's own activity become stronger
Late adolescence (16–18 years)	Original ideas and creative approaches become more pronounced	Metacognitive regulation develops

As can be seen from the data presented in the table, creative thinking and metacognitive awareness become increasingly complex with age. Initially, a child engages in creative activity mainly through imagination and fantasy. Later, as the amount of acquired knowledge increases, creative thinking becomes more logical and independent in nature.

Particularly during adolescence and late adolescence, the development of reflection and abstract thinking enables students not only to generate new ideas but also to analyze and evaluate them.

During the upper secondary school period, the development of creative thinking and metacognitive awareness takes place under the influence of several psychological factors.

Scheme 1

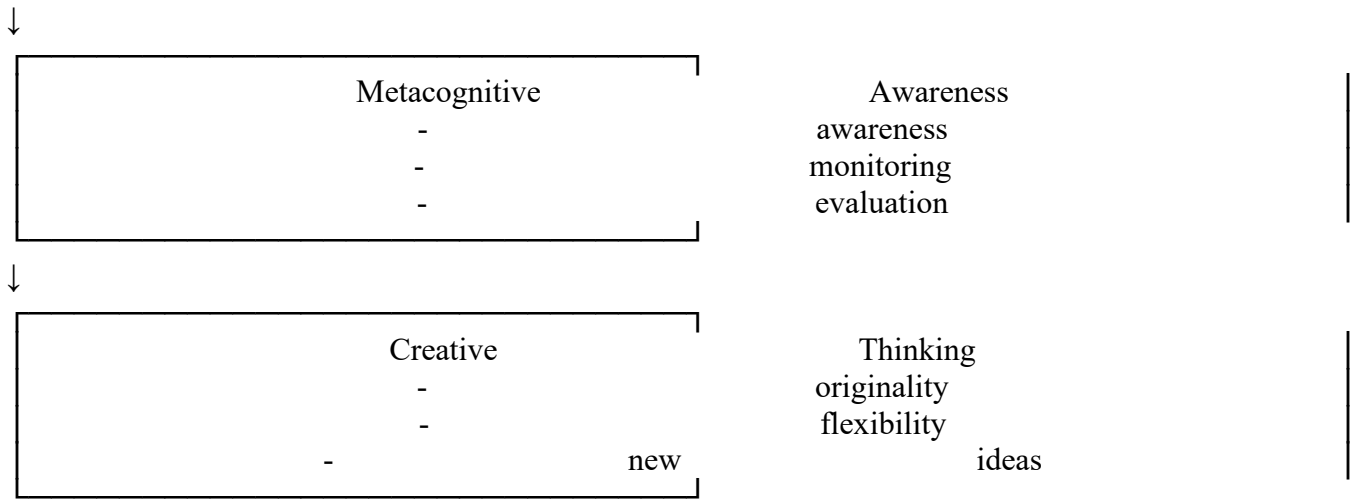
Age-Related Development Model of Creative Thinking and Metacognitive Awareness

AGE DEVELOPMENT

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Cognitive (thinking,	Development knowledge)

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DEVELOPMENT OF A CREATIVE PERSONALITY

As can be seen from this model, the development of creative thinking is primarily associated with the expansion of cognitive capacities. As individuals grow older, the development of their knowledge system, abstract thinking, and reflective abilities contributes to the formation of metacognitive awareness.

Metacognitive awareness, in turn, functions as a mechanism that regulates creative activity. As individuals become increasingly capable of monitoring their own thinking processes, their opportunities to generate new ideas and evaluate them from a practical perspective also increase.

CONCLUSION

The development of creative thinking and metacognitive awareness is a complex age-related psychological process. These processes are formed under the influence of a child's cognitive development, social experience, and educational activities.

Adolescence and late adolescence constitute important stages in the development of creative thinking and metacognitive awareness. It is precisely during these periods that abstract thinking, reflection, independent thinking, and the ability to regulate one's own activity develop intensively.

Thus, in order to develop students' creative thinking, it is necessary not only to develop their knowledge and skills but also to enhance their ability to understand and regulate their own thinking processes.

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