The Psychological Mechanism of Developing Schoolchildren's Interest in Science in a Digital Educational Environment

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Abstract

The article presents the results of the research of schoolchildren's interest in scientific activities in a digital educational environment. It examines the theoretical foundations of the concept of 'interest in science' and the psychological mechanisms that determine its formation and development. The aim of the article is to reveal the components of the psychological mechanism that contribute to the formation and strengthening of schoolchildren's interest in science in the context of the digitalisation of education, as well as to identify the pedagogical conditions that ensure the effectiveness of this process.

Modern society makes new demands on the educational process, where it is important not only to transfer knowledge, but also to form a stable motivation for research and cognitive activity in learners. In a digital educational environment that combines modern technologies, devices, resources, and methods aimed at supporting and developing the learning process, the opportunities for learning and self-development for schoolchildren are significantly expanding. The digital space includes online courses, educational applications, virtual laboratories and a wide range of interactive resources that make the learning process more flexible and accessible.

The development of digital technologies provides great opportunities for popularising science, but at the same time requires innovative pedagogical solutions that can take into account the cognitive and psychological characteristics of the current generation of schoolchildren – the children of the 'Alpha' era. Modern scientific communities around the world actively use digital technologies to disseminate educational content and popularise science. Despite numerous researches in this sphere, the problem of effective stimulation of cognitive interest and formation of internal needs for individual mastering of knowledge remains relevant. Its solution will allow expanding participation of schoolchildren in research activities and, as a result, will contribute to the formation of the country's intellectual potential and growth of its socio-economic development.

Social media is also becoming a platform for scientific communication. For example, through platforms such as Twitter and LinkedIn, scientists share the results of their researches and discoveries, which allows schoolchildren to be closer to real scientific life and motivates them to explore particular branches of science. In addition, popular science channels such as 'Veritasium', 'Kurzgesagt – In a Nutshell' and 'SciShow' explain complex phenomena in accessible and fascinating ways. This helps schoolchildren see that science is not only an important part of the modern world, but also an exciting and interesting activity.

The results of the research showed that the formation of interest in science among schoolchildren is a holistic and gradual process based on the interaction of cognitive, emotional, motivational, social and digital components. It begins with the child's natural curiosity and gradually transitions into conscious, sustained cognitive activity. Influenced by emotional experiences, support from teachers and peers, and the use of modern digital technologies, interest in science becomes an internal motivation that encourages schoolchildren to engage in research activities and independently search for knowledge.

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Keywords

Digital educational environment, motivation for research activity, schoolchildren's interest in science, psychological mechanisms, pedagogical conditions, digitalisation of education.