ELECTRONIC PORTFOLIO SYSTEM AS A MEANS TO FOSTER STUDENTS' METACOGNITIVE THINKING

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Annotation: The electronic portfolio system is a powerful tool for developing metacognitive thinking in students. This paper examines the use of e-portfolio systems as a means of enhancing metacognitive thinking in students, and reviews and analyzes the valuable literature on approaches that influence learning outcomes.

Keywords: Electronic portfolio, metacognitive thinking, educational technology, personal development, technology improvement.

Introduction. Rapidly evolving digital technologies have transformed various aspects of education, and the integration of electronic portfolio systems has emerged as a promising approach to developing metacognitive thinking in students. Metacognitive, that is, the ability to think about independent learning processes and strategies, is an important skill that enables students to become self-directed, lifelong learners.

This article analyzes and explores the potential of electronic portfolio systems in developing metacognitive thinking in modern education. By providing students with a dynamic and accessible platform for documenting their learning, these systems encourage them to actively participate in self-reflection, goal setting, and assessment of their achievements. The digital nature of electronic portfolios allows for the seamless integration of multimedia resources, which further enhances the accuracy and richness of the learning experience.

Through the lens of empirical research and case studies, this article explores the unique ways in which electronic portfolio systems promote metacognitive development. It explores design principles and implementation strategies that optimize the effectiveness of these tools in developing students' ability to monitor, track, organize, and improve their own learning. As a result, this article aims to provide valuable insights for educators, instructional designers, and policymakers

seeking to harness the power of technology to foster the metacognitive skills necessary for 21st-century student success.

Appendix 1 to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 824 dated December 31, 2020 “On measures to improve the system related to the organization of the educational process in higher educational institutions” states that “Assessment methods include written, oral, practical work, projects, portfolios and tests that reflect and confirm the student's achievements within the subject or module. The assessment criterion must reflect the achievement of the learning outcome.” [1] A number of works are being carried out in higher educational institutions of our republic to ensure the implementation of this resolution. The inclusion of a student portfolio as part of assessment methods is of great importance in today's era of developed information technologies. The creation and effective use of a student portfolio is an urgent and problematic issue today.

Metacognitive thinking involves the awareness and understanding of one's own cognitive processes. It is the ability to reflect on one's own thinking, to plan, monitor, and evaluate learning and problem-solving strategies. The development of metacognitive thinking begins in early childhood, as children begin to become aware of their own mental states and the strategies they use to learn and solve problems. As children grow older, their metacognitive abilities become more sophisticated, allowing them to better organize their learning, set goals, and adapt their strategies to different situations. The development of metacognitive thinking is essential for academic success because it allows people to self-regulate and learn effectively.[2]

Literature review and methods. Electronic portfolio systems (EPS) are receiving a lot of attention and interest in the field of education because they offer a comprehensive approach to developing students’ metacognitive thinking. Many studies have examined the potential of e-portfolios in developing students’ metacognitive thinking. Research consistently shows that e-portfolios can develop these skills and serve as a medium for reflecting on knowledge and achievements. According to Barrett, EPS facilitates continuous self-assessment and goal setting, important components of metacognitive thinking.[4] Furthermore, as other researchers have noted, EPT allows students to systematically document and reflect on their learning experiences, which can promote deeper cognitive engagement and self-regulation.

Scholars such as Butler and Philippa emphasize how e-portfolios provide students with the opportunity to actively participate in the learning process, document their achievements, and reflect on their own learning growth..[5] These

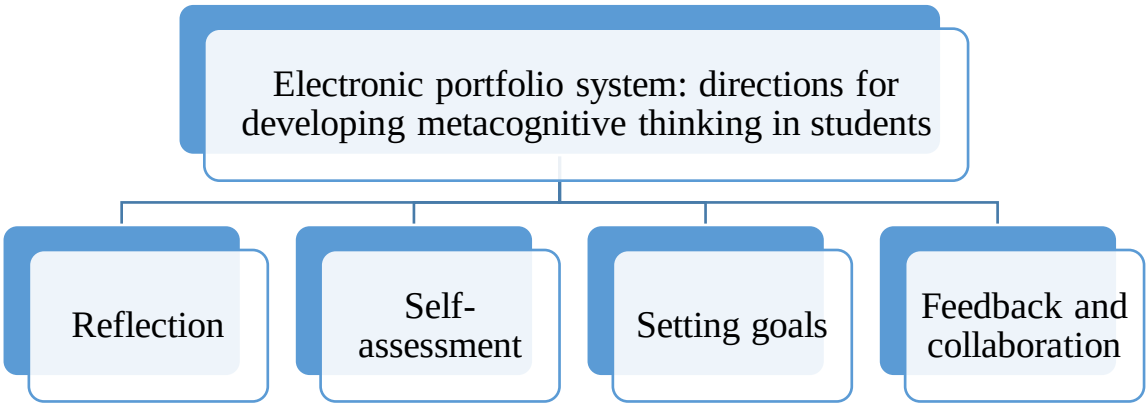
reflective processes are fundamental to the development of metacognitive thinking, as they encourage students to monitor their learning, identify strengths and weaknesses, and implement ways to improve.

Furthermore, research by Nafari et al. suggests that the flexibility and multimedia capabilities of e-portfolios allow students to showcase their learning in a variety of formats, further enhancing their metacognitive skills in organizing and presenting their work.[6] By organizing their work, setting goals, and receiving feedback in an electronic portfolio system, students gain a deeper understanding of their learning processes.

Overall, the literature emphasizes the important potential of e-portfolio systems in developing metacognitive thinking in students, providing them with tools and strategies to become self-directed and logically thinking students.

Results and discussion. Research has shown that the use of e-portfolios enhances students' metacognitive awareness and self-regulated learning. [7] Feedback from teachers and peers further supports students' metacognitive development. An electronic portfolio system is a powerful tool for developing metacognitive thinking in students. An electronic portfolio, also known as an e-portfolio, is a digital collection of a student's work, reflections, and learning experiences that can be used to demonstrate their growth and development over time.

The process of creating and maintaining an electronic portfolio encourages students to engage in metacognitive thinking in several ways:



1. Reflection. Creating an e-portfolio requires students to reflect on their knowledge, strengths, weaknesses, and goals. This helps them become more aware of their thought processes and identify areas for improvement.

2. Self-assessment. Electronic portfolios allow students to track their progress and assess their learning over time.[8] Students can compare their current work with

their previous work to assess their growth and identify areas where they need to focus their efforts.

3. Setting goals: The electronic portfolio system serves as a platform for students to set learning goals and develop strategies to achieve them. As students work toward these goals, they engage in metacognitive thinking to monitor their progress and make adjustments as needed, strengthening their academic capabilities.

4. Feedback and collaboration: E-portfolios often include opportunities for feedback from teachers, colleagues, and other stakeholders. This feedback can help students identify their strengths and weaknesses in their thinking and develop more effective learning strategies.[9]

However, effective implementation of e-portfolios requires careful consideration of technological, instructional, and affective aspects. Teachers should provide clear instructions, support, and feedback to ensure students engage in meaningful reflection and self-assessment. In addition, the e-portfolio system should be user-friendly and accessible to students and teachers.

By integrating an electronic portfolio system into the learning process, teachers can help develop metacognitive thinking, enabling students to become self-aware, self-regulated, and responsive to modern demands.

Conclusion. In conclusion, the implementation of an electronic portfolio system significantly contributes to the development of metacognitive thinking in students. By actively participating in the process of documenting and demonstrating their learning experiences, students become aware of their cognitive processes. [10] This high level of accuracy fosters critical self-assessment and strategic planning, important components of metacognition. Not only does an e-portfolio system facilitate ongoing reflection, it also provides an important platform for students to track their learning progress and set future educational and career goals. It also increases the accessibility of the system's digital space and allows for dynamic, iterative feedback from teachers, which further strengthens metacognitive skills. Overall, the adoption of e-portfolio systems is an important tool in the development of educational practice, helping students not only achieve academic success, but also prepare personnel with self-management and metacognitive thinking skills.

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