MECHANISMS FOR MONITORING THE LEARNING PROCESS AND IMPROVING THE QUALITY OF EDUCATION IN DIGITAL LEARNING PLATFORMS

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Abstract. This thesis examines the role, capabilities, and significance of monitoring the learning process through digital learning platforms in improving the quality of education. It discusses mechanisms for tracking students' learning activities, analyzing academic performance indicators, assessing independent learning activities, and making pedagogical decisions based on the collected data. Furthermore, the potential of Learning Analytics, automated assessment, individualized feedback, and artificial intelligence technologies in improving digital monitoring systems is explored.

Keywords: digital education, learning platform, learning process, monitoring, quality of education, Learning Analytics, electronic assessment, artificial intelligence, independent learning.

Introduction

Today, the widespread implementation of digital technologies in the education system is creating new mechanisms for organizing, managing, and evaluating the learning process. Digital learning platforms such as Moodle and Google Classroom provide opportunities to distribute learning materials, assign tasks, assess knowledge, and facilitate interaction between teachers and students.

In the context of digital education, ensuring the effectiveness of the learning process is not limited to the use of electronic resources. It is also necessary to systematically monitor students' learning activities, identify difficulties in academic performance in a timely manner, and determine appropriate pedagogical interventions. In this regard, improving monitoring systems within digital learning platforms represents an important direction for enhancing the quality of education.

Learning process monitoring is the systematic observation, analysis, and assessment of students' learning activities, task completion, knowledge acquisition, and achievement of intended learning outcomes. Within digital platforms, this process can be implemented through the collection and processing of electronic data and the visual presentation of monitoring results. The main indicators used to monitor learning activities on digital platforms include students' platform engagement, interaction with learning materials, timely submission of assignments, test results, the quality of independent learning tasks, and changes in academic performance. Analyzing these indicators collectively helps provide a more comprehensive understanding of students' learning activities. However, it is important to recognize that the number of platform logins or the amount of time spent on the system alone cannot fully reflect students' knowledge levels or the overall quality of learning.Monitoring the learning process and improving the quality of education through digital platforms can be organized using the following mechanisms.

First, automated monitoring. Automatically recording assignment completion, test results, submission deadlines, and academic performance indicators reduces the workload associated with teachers' monitoring activities. This enables learning difficulties to be identified more promptly.

Second, analysis based on Learning Analytics. Analyzing data collected throughout the learning process makes it possible to identify positive and negative trends in students' academic performance.

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Based on these findings, teachers can plan additional learning activities, individualized assignments, and supplementary materials for revision.

Third, the development of individualized learning pathways. Learning tasks, digital resources, and recommendations can be tailored to students' knowledge levels, individual needs, and learning outcomes. This approach supports the personalization of education and the development of independent learning skills.

Fourth, timely feedback and electronic assessment. Online tests, electronic assignments, criterion-based assessment, and teachers' comments help students understand their mistakes and improve their knowledge. Clearly defined assessment criteria also contribute to greater transparency and fairness in the evaluation process.

Fifth, the application of artificial intelligence technologies. Artificial intelligence tools can assist in analyzing changes in learning outcomes, identifying students experiencing academic difficulties, and generating individualized recommendations. However, such recommendations should be reviewed by teachers, and final pedagogical decisions should remain under human supervision. To ensure the effective implementation of these mechanisms, monitoring should be organized systematically. This process involves interconnected stages, including defining learning objectives, selecting monitoring indicators, collecting data, analyzing results, determining appropriate pedagogical interventions, and reassessing their outcomes. Protecting personal data, ensuring the appropriate use of information about students' digital activities, and maintaining fairness in assessment are also essential aspects of the monitoring process. Therefore, monitoring indicators should correspond to educational objectives, and the results should reflect students' knowledge and competencies as objectively as possible.

Conclusion

In conclusion, monitoring the learning process through digital learning platforms creates important opportunities to improve educational quality, analyze students' academic performance, and enhance pedagogical practices. The integration of automated monitoring, Learning Analytics, individualized learning pathways, timely feedback, and artificial intelligence technologies supports data-informed management of the learning process. The practical implementation of these mechanisms requires the regular analysis of monitoring results, the selection of appropriate pedagogical interventions to address identified difficulties, and the subsequent evaluation of their effectiveness. As a result, digital learning platforms can develop beyond tools for delivering electronic learning materials and become comprehensive pedagogical environments that support the continuous improvement of educational quality.

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