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THE IMPORTANCE OF RESEARCHING STUDENTS' TESTING RESULTS IN DIGITAL SYSTEMS (USING THE EXAMPLE OF LYUBOTYNSKY PROFESSIONAL LYCEUM OF RAIL TRANSPORT)

The research of students' testing results in digital systems is of great importance in contemporary pedagogical practice. This presentation explores the significance of analyzing test data for assessing the learning process and developing teaching methodologies. It also investigates the impact of digital technologies on the testing process and identifies avenues for further research in this field with an example testing system for Lyubotynsky Vocational Lyceum of Railway Transport.

Keywords: Testing, Digital Systems, Educational Effectiveness, Quantity Analysis, Student's Experience, Educational Process.

Важливість дослідження результатів тестування здобувачів освіти в цифрових системах (на прикладі Люботинського професійного ліцею залізничного транспорту). Дослідження результатів тестування здобувачів професійної освіти у цифрових системах має велике значення в сучасній педагогічній практиці. Розглянуто важливість аналізу тестових даних для оцінювання освітнього процесу та розвитку навчальних методик. Вивчено вплив цифрових технологій на процес тестування та наголошено на перспективах подальших досліджень у цьому напрямі на прикладі системи тестування Люботинського професійного ліцею залізничного транспорту. На основі здобутих результатів зроблено висновок, що введення цифрових систем тестування має значний потенціал для оптимізації освітнього процесу, тому педагогічні працівники мають продовжувати досліджувати та впроваджувати інноваційні цифрові методи для поліпшення якості освіти та підвищення мотивації здобувачів освіти. Змішаний підхід із порівнянням результатів роботи освітнього процесу та доопрацювання системи

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на основі зворотного зв'язку студентів і викладачів уможливають більш досконалий підхід до контролю знань. Наголошено, що новий підхід сприятиме залученню сучасних сервісів і технологій, які дають змогу здобувачам професійної освіти і викладачам ефективно використовувати свій час для розв'язання завдань.
Ключові слова: *тестування, цифрові системи, ефективність навчання, кількісний аналіз, студентський досвід, навчальний процес.*

Introduction. In the modern educational environment, conducting student testing plays a central role in assessing their performance and shaping pedagogical strategies [2, с. 40–41]. Additionally, it is worth noting that the use of digital systems in testing is becoming increasingly relevant. The research is conducted based on a system specifically developed for the Lyubotyn Professional Lyceum of Rail Transport in the field of preparing railway students for their professional duties.

Purpose, methods and approaches. The purpose of this study is to analyze the effectiveness of testing methods in the specified educational institution and to identify their impact on students' academic performance. The report of this work will employ a mixed approach, combining quantitative analysis of grades with qualitative exploration of students' opinions on digital testing platforms. This comprehensive approach aims to provide a holistic view of the effectiveness of digital testing methods in the lyceum's educational process.

To achieve this goal, a mixed approach is applied, which combines qualitative and quantitative research methods. Firstly, a quantitative analysis of test results is conducted, comparing the grades of students who underwent testing using digital systems with those who used traditional methods. This allows us to obtain objective data on the level of student performance.

A qualitative approach is planned, involving surveys of students and collecting their feedback on the use of digital testing platforms. This allows us to gain insights into their experience with these systems, their advantages, and disadvantages. This feedback is collected through the testing system as a short survey, which can be improved or tailored to what specifically students liked or disliked.

The approach is based on a comprehensive study of the impact of digital systems on the testing and learning process [1, с. 27–39]. It considers not only the final test results but also the process of conducting them, students' interaction with digital platforms, and their impressions of learning in this format. This allows for a deeper understanding of how digital systems affect the educational process and how they can be optimized for better results.

It is important to understand the effectiveness of digital platforms for testing in improving the educational process and enhancing academic outcomes. In this context, the use of Angular and Node JS frameworks for system implementation, together with design based on Material Design ideology, enables the creation of convenient and

efficient digital environments for testing. This integration of advanced technologies and design principles not only contributes to the smooth functioning of the testing system but also fosters a more engaging and productive learning experience for students.

The research will be conducted as follows. First, the student must be registered in the testing system using a login and password. After email confirmation, each student receives a list of disciplines and a list of tasks (tests) for each discipline. Secondly, they take the tests, which appear as an active list on the main page of the system. As a result of test completion, students receive scores displayed on the main window page. A standard approach using OAuth technology was developed for user authorization [2, с. 36–37].

On the other hand, the teacher can also access the testing system by registering with a login and password. After registration, they can immediately start creating tasks for students.

Further functionality of the system will be developed taking into account the pedagogical needs of teachers and the overall feasibility of implementing functionality similar to well-known analogs like Moodle [2, с. 22–23].

It is also important to note that the presence of the teacher during testing is mandatory more from the standpoint of process management and setting rules and evaluation criteria [3, с. 17–18]. The teacher plays the role of controlling the testing process but does not directly participate. This approach allows learners and educators to work asynchronously.

The main results. The results of research by other scientists confirm the high efficiency of using digital systems in the student testing process [4, с. 11–12]. Quantitative analysis has shown that students who used digital platforms demonstrated significantly better results compared to students using traditional methods.

Digital testing platforms ensure greater student engagement in the learning process [4, с. 76-83]. Students feel more motivated to participate in testing through the use of interactive and interesting digital tools. One of the very important product criteria is its modern look, which significantly affects the user's interest and perception of things from different angles.

One of the main advantages of digital systems is their flexibility and accessibility. Students can take tests at any convenient time and place, which enhances the convenience and effectiveness of learning [2, с. 8–9].

Qualitative research will allow obtaining important feedback from students about their experience with digital testing platforms.

Conclusions. Based on the obtained results, it will be possible to conclude that the implementation of digital systems in testing has significant potential for optimizing

the educational process. Pedagogical workers should continue to explore and implement innovative digital methods to improve the quality of education and increase student motivation.

Additionally, this mixed approach, comparing the results of the educational process and refining the system based on feedback from students and teachers, is expected to lead to the invention of a more sophisticated approach to knowledge control. This new approach should involve the use of modern services and technologies that allow students and teachers to effectively utilize their time for task solving.

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