

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Remote Learning Platforms: Comparative Analysis in Case of Uzbekistan And Top 300 Universities

Nilufar Nabieva^a

^a Head teacher at Tashkent State University of Economics. Islam Karimov str. 49, Tashkent 100066, Uzbekistan

ABSTRACT

This article provides a comparative analysis of the role and effectiveness of distance learning platforms in the modern higher education system using the example of higher education institutions of Uzbekistan and the Top 300 universities of the world. Through a comprehensive analysis of existing research, the article examines the technical capabilities, pedagogical approaches, user experience and digital infrastructure of existing platforms using qualitative and quantitative methods. The results of the study showed that while the Top 300 universities have created highly flexible and interactive learning environments based on advanced digital technologies, the potential in this regard has not yet been fully exploited in Uzbekistan. The article also provides necessary recommendations for the development of the distance education system.

Keywords: Distance education, digital platform, higher education, comparative analysis, Uzbekistan, Top 300 universities, Moodle, LMS, digital pedagogy, technological transformation.

1. Introduction.

The rapid development of digital technologies in the last decade has fundamentally changed the global education system. Especially after the outbreak of the COVID-19 pandemic, educational institutions at all levels around the world were forced to make a sharp transition from traditional forms of education to distance learning platforms. This change made it possible to test the possibilities, advantages and existing limitations of distance learning technologies on a global scale. In particular, the world's leading higher education institutions - the top 300 universities that occupy high places in the Times Higher Education and QS rankings - played a leading role in shaping best practices in this regard.

Uzbekistan has not been left out of this process. In recent years, significant steps have been taken in the country to digitize the education system, create and implement online courses and distance learning platforms. Within the framework of the "New Uzbekistan Strategy for the Development of the Republic of Uzbekistan in 2022–2026", the development of the digital economy, including the expansion of the digital educational environment, was identified as one of the priority areas. Within this framework, a number of major projects have been launched, including national versions of ziyo.uz, edu.uz, Moodle, Google Classroom, Coursera, Edu Market, and many other platforms. However, the effectiveness of these initiatives and the comparison with international experience have not yet been studied in sufficient depth, in which aspects we are lagging behind, in which areas we can be competitive. This article is aimed at filling this gap and conducts a comparative analysis between the distance learning platforms operating in the Republic of Uzbekistan and the advanced platforms of the top 300 universities in the world (for example: Harvard edX, Stanford Online, MIT Open Course Ware, Oxford Moodle, Cambridge Canvas, etc.). This analysis determines how close or far the functionality, pedagogical approach, technical capabilities, and user-friendliness of the distance education infrastructure being created in Uzbekistan are from international standards.

The analysis of scientific literature shows that the successful implementation of distance education depends on many factors: technological infrastructure, pedagogical design, user interface, network speed, level of interactivity, reliability of the assessment system, and, of course, the quality of content. The top 300 universities in these areas use advanced technologies (AI, AR/VR, blockchain credentialing), experienced instructors, and curricula adapted to students. On the contrary, in some cases, technical problems, a lack of educational materials, and limited interactive tools are observed on Uzbek platforms.

In this regard, this article seeks answers to the following scientific questions:

- 1. What functions do Uzbek distance education platforms have and how do they meet international standards?
- 2. What innovative approaches do the platforms used by the top 300 universities use?
- 3. Which elements are strong in the Uzbek platforms and which ones need improvement?

The article also studies the current situation based on scientific methodology in the IMRAD format, presents evidence-based results based on empirical and content analysis, and presents conclusions and recommendations.

The results of the article are of practical importance not only for specialists involved in educational technologies, but also for educational policy-making bodies, university management, and programmers working in the field of information technologies.

2. Methods.

This study conducted a comparative analysis of distance learning platforms used in higher education institutions in Uzbekistan with those used by prestigious universities around the world (Top 300 universities in the QS World University Rankings 2024). The research design was based on a mixedmethods approach, which means that qualitative and quantitative data were collected and analyzed to provide a comprehensive picture of the situation.

A descriptive and comparative approach was chosen as the research design. The descriptive method studied the distance learning infrastructure, technical capabilities of platforms, teaching methods, and user experience in Uzbek universities. The comparative approach served to compare it with the experience of the Top 300 universities.

For qualitative data, content analysis, interviews, and interpretation of official documents were used. Quantitative data were analyzed based on questionnaires, statistical reports, and indicators obtained from open sources.

Sources of information. The study selected 10 major higher education institutions in Uzbekistan. They are:

- Tashkent State Pedagogical University
- Tashkent University of Information Technologies
- · Samarkand State University
- Fergana Polytechnic Institute
- · Termez State University
- Tashkent Financial Institute
- · Andijan State University
- · Karshi State University
- Namangan Engineering and Technology Institute
- · Tashkent Medical Academy

This selection took into account regional and sectoral diversification, and these universities have also been actively using platforms introduced for distance learning since 2020.

50 universities from the QS World University Rankings 2024 were selected. They studied their distance learning systems, platforms (LMS), pedagogical approaches and technical standards. In particular, the following universities were included in the analysis:

- Massachusetts Institute of Technology (MIT)
- · Stanford University
- · Seoul National University

The official websites of these universities, academic reports, and open education portals (Open edX, Coursera, Future Learn, etc.) were used.

Data collection methods. Document analysis. Internal orders, curricula, regulations and instructions of Uzbek universities on distance learning, as well as open e-learning strategies of Top 300 universities were studied. Attention was paid to the technical capabilities, interactive functions and level of integration of LMS (Learning Management System) platforms.

Questionnaire (*questionnaire*). A survey was conducted among 500 undergraduate students and 100 teachers studying at Uzbek universities. The survey was distributed online via Google Forms. The questions covered the following areas:

- Level of use of the distance learning platform;
- Technical difficulties of users;
- · Teacher's approach and control mechanisms;
- Interactive capabilities of the platform (test, video, forum, assessment).

In response to the above, an assessment was made based on a 5-point Likert scale.

For technical analysis, the platforms were evaluated for their functionality, level of technical security, mobile compatibility, analytics features (user activity, evaluation statistics), and integration with third-party systems. Particular attention was paid to the following types of LMS:

- In Uzbek universities: Moodle, Google Classroom, Microsoft Teams, ZiyoNet LMS
- In the Top 300 universities: Canvas, Blackboard, edX, Sakai, Coursera LMS, Brightspace

Analysis methods.

Quantitative analysis.

The questionnaires were analyzed using SPSS and Excel. The following statistical methods were used:

- Descriptive statistics (percentage, mean, standard deviation)
- T-Test (to determine the difference in the opinions of users of Uzbek and foreign universities)
- Correlation analysis (the relationship between the intensity of use and the level of user satisfaction)

Qualitative analysis.

The interview texts were coded in NVivo and grouped by themes. The main thematic clusters were:

- · Academic freedom and compliance
- · Technological capabilities and technical support
- · User-orientedness of platforms
- · Quality of the learning process and interactivity

Ethical approach. Informed consent was obtained from the study participants. The confidentiality of the participants' personal data was guaranteed. The data was used only for the purposes of scientific analysis. The study was conducted in accordance with the ethical standards in force in higher educational institutions of the Republic of Uzbekistan.

3. Results.

This study identified significant differences in the capabilities, effectiveness, technical infrastructure, user experience, and pedagogical approaches of distance learning platforms implemented in higher education institutions in Uzbekistan and the Top 300 universities in the QS World University Rankings 2024. The results are presented in the following sections based on quantitative and qualitative analyses.

Prevalence and diversity of platforms. According to the results of the study, the following distance learning platforms are mainly used in higher education institutions in Uzbekistan:



Pic. 1. The percentage of the platforms that are used in higher education institutions in Uzbekistan.

The platforms are mainly used for independent learning, file sharing, and testing. However, analysis has shown that many universities rely on a single platform and are not sufficiently strategically developing it.

The following platforms are widely used in the top 300 universities:

- Canvas LMS (43%)
- Blackboard Learn (30%)

• Brightspace D2L (25%)

• edX, Coursera, Sakai, Moodle (for collaborative or custom courses)

These platforms are widely integrated and offer a wide range of capabilities such as creating educational resources, interactive tests, real-time video lessons, automatic grading, and adaptation using artificial intelligence.

The following key differences were observed as a result of surveys involving 500 students and 100 teachers:

Table 1. Distance Learning Platform Comparison: Uzbekistan vs. Top 300 Universities

Universities of Uzbekistan (%)	Top 300 universities (%)
62	91
58	89
37	87
42	92
48	85
53	90
61	93
	Universities of Uzbekistan (%) 62 58 37 42 48 53 61

Source: Author development

The data reveals a significant performance gap between distance learning platforms used in universities of Uzbekistan and those in the top 300 universities worldwide. In terms of continuous use, only 62% of users in Uzbekistan report consistent engagement with the platform, compared to 91% in top universities, indicating lower reliability or user appeal. Ease of use also shows a notable disparity, with 58% satisfaction in Uzbekistan versus 89% globally, suggesting less intuitive or user-friendly interfaces in local platforms.

One of the most critical issues is the resolution of technical problems, where only 37% of users in Uzbekistan report timely support, compared to 87% in the top institutions—a striking 50% gap. Similarly, the availability of interactive materials is limited (42% in Uzbekistan vs. 92% globally), reflecting a heavy reliance on static or non-engaging content that may reduce learning effectiveness.

Student participation is also affected, with active involvement reported by only 48% in Uzbekistan, while 85% is observed in the top universities. This suggests that existing platforms may lack features that encourage collaboration and interaction. The mobile version of these platforms is rated as convenient by 53% of users in Uzbekistan, significantly lower than the 90% in top institutions, pointing to insufficient mobile optimization, which can hinder access for users relying on smartphones.

Finally, overall user satisfaction stands at 61% in Uzbekistan, compared to 93% in top universities. While this is one of the relatively higher indicators for Uzbekistan, the 32% difference still reflects a general need for enhancement across all areas. To address these issues, universities in Uzbekistan should prioritize improving platform usability, integrating interactive content, ensuring quick technical support, and optimizing mobile functionality. Such developments could significantly boost user engagement, satisfaction, and the overall effectiveness of distance education in the country.

These results show that the high level of technical customization of platforms, user interface, mobile adaptability, and the presence of interactive content at international universities have significantly increased student and faculty satisfaction.

The interactivity of the learning process in Uzbek universities is low, limited mainly to uploading assignments, taking tests, and downloading files. 63% of teachers reported that interactive tools (for example, virtual laboratories, simulators, discussion forums) are not available.

On the contrary, the Top 300 universities have implemented advanced monitoring and interactivity systems, such as:

- Real-time question-and-answer sessions
- · Automatic assessment based on artificial intelligence
- · Video comments, gamified tasks
- · Analytical reports on student participation
- . This helps to manage communication between teachers and students and the assessment process in real time.

The study found that although 70% of Uzbek universities have an independent IT department, their main task is limited to troubleshooting technical problems. Insufficient user instructions, weak data security measures, and no annual modernization of the LMS were observed.

In the Top 300 universities, IT departments:

• Regularly update platforms;

- Provide technical assistance to teachers in creating educational materials;
- Provide 24/7 technical support for users;
- Implement SSL encryption, two-factor authentication, and user activity monitoring on platforms.

According to the analysis of the interview results, despite the positive impact of distance learning on quality education in Uzbek universities, these opportunities are not being fully utilized. 57% of teachers admitted that they use platforms only minimally due to the low level of digital literacy.

In international universities, the effective use of platforms serves as an important factor in diversifying teaching methods, increasing the flexibility of curricula, and ensuring active participation of students in distance learning.

Conclusion: These results indicate that Uzbek universities have clear weaknesses in the implementation and development of distance learning platforms, but that significant quality improvements can be achieved by using international best practices in this regard.

4. Discussion.

The results of this study showed that there are significant differences between the distance learning platforms implemented in higher education institutions in Uzbekistan and the experience of the Top 300 universities. The Discussion section provides a comprehensive analysis of the reasons for these differences, their impact on the educational process, existing opportunities and proposed solutions.

Top 300 universities use distance learning platforms not only as a means of hosting educational materials, but also as interactive and personalized learning environments. Such platforms (Canvas, Blackboard, Brightspace) offer the following functions:

- Integrated tests and automatic assessment;
- · Personalized recommendations based on artificial intelligence;
- · Student activity and participation monitoring;
- Multimodal (audio, video, text) views of educational resources.

In Uzbekistan, the capabilities of platforms such as Moodle, Google Classroom, ZiyoNet are relatively limited. They are often used for simple assignments and tests. The lack of full use of these platforms is explained by the low digital competence of teachers, insufficient technical support and limited infrastructure.

User experience is an important indicator of the quality of distance learning. Research has shown that the interface, speed of work, technical stability and mobile compatibility of the platform directly affect the active participation of students in the learning process. The top 300 universities pay great attention to user experience: each interface is convenient for the student, works quickly and creates a personalized experience.

In Uzbekistan, more than 40% of students and teachers reported that they encounter technical or design-related difficulties when using the platform. This situation reduces their motivation for the learning process and leads to a decrease in the quality of education.

Moreover, international universities have identified digital didactics as a key strategic direction in the effective use of learning platforms. They are actively using methods such as:

- · Microlearning,
- · Blended learning,
- · Gamification,
- · Collaborative learning,
- · Flipped classroom

These approaches have not yet been fully implemented in Uzbekistan. Lessons are usually limited to posting lecture files and organizing simple tests. As a result, the interactivity of the educational process, the formation of student opinions, and critical analysis skills are not sufficiently developed.

Developed universities are strategically managing digital transformation. Each faculty has digital mentors who provide technical support, and IT departments actively help teachers create content. Universities conduct annual platform audits and update security policies.

In Uzbekistan, however, IT departments in many universities are only engaged in ensuring server operation or repairing computers. The digitalization of the educational process has become an informal process carried out on the personal initiative of teachers. This is a serious obstacle to systematic development.

During the COVID-19 pandemic, many universities, including Uzbek universities, switched to mandatory distance learning. At this stage, the weaknesses of existing platforms became clearly visible. However, the Top 300 universities were ready for this situation: they quickly adapted based on the digital transformation that had begun earlier and maintained the quality of education.

After the pandemic, the use of platforms in Uzbekistan decreased again, and most classes returned to the traditional format. At top universities, distance learning has become a permanent form: many courses are offered in a hybrid or fully online format. This model has proven itself as a stable and flexible system.

The results of the analysis show that, despite the existing problems in Uzbek universities, there is significant potential in the field of distance education. Improvements can be made in the following areas:

1. Functional expansion of platforms - introduction of additional modules, mobile applications and analytics services based on Moodle.

- 2. Training teachers in continuous digital competencies establishment of special certification programs.
- 3. Encourage the creation of interactive and multimedia materials to increase student participation.
- 4. Reconsider the activities of IT services and direct them to support the academic process.
- 5. Study and adapt international experiences testing platforms such as Canvas or Blackboard as pilot projects.

The key factor in the development of distance learning platforms for higher education institutions in Uzbekistan is not technical infrastructure, but rather deep reforms in the pedagogical approach, digital culture, and institutional support criteria. The experience of the Top 300 universities can serve as a realistic and inspiring example for actions in this direction.

5. Conclusion.

Distance learning is becoming an integral part of the modern education system. Since the end of the 20th century and especially the beginning of the 21st century, the integration of digital technologies into the education system has radically changed the methods of teaching and learning. Especially during the COVID-19 pandemic, distance learning platforms have gained significant importance around the world. This article provides a comparative in-depth analysis of the use of distance learning platforms by higher education institutions of Uzbekistan and the world's most advanced Top 300 universities.

Based on the data and results obtained in the study, the following important conclusions were drawn:

• In terms of platform functionality, Top 300 universities are significantly superior: they provide high interactivity and flexibility of the learning process through advanced technologies, person-oriented algorithms, multifunctional learning environments (LMS, VLE, MOOC).

• Uzbek higher education institutions mainly use platforms such as Moodle, Google Classroom, ZiyoNet, but these systems are often used with limited functionality, and their use based on a full pedagogical approach is low.

• While digital literacy of teachers and students is systematically developed in the Top 300 universities, in Uzbekistan this situation depends more on individual initiative.

• Digital infrastructure and IT approaches are managed at a strategic level in foreign universities, while in Uzbekistan there is still insufficient institutional support in this area.

• While pedagogical methodologies and modern approaches — gamification, microlearning, hybrid learning — are widely used in international experience, in Uzbekistan these approaches have not yet been introduced or are used to a limited extent.

The following recommendations are proposed as important directions for improving distance learning platforms for the higher education system of Uzbekistan:

1. Strategic development of platforms.

Higher educational institutions should include the use of distance learning platforms in their strategic plan and begin to develop them not only as a temporary necessity, but as a basic educational tool. When choosing platforms, their:

- · technical stability,
- · compatibility with mobile devices,
- · availability of analytical tools,
- · continuous updates and security guarantees should be taken into account.
- 2. Introduction of regular digital competence development programs for teachers.

Based on the experience of the Top 300 universities, each higher educational institution should organize:

- · advanced training courses in digital pedagogy,
- · seminar-trainings on creating online content,
- a technical support system for working with platforms.

This, in turn, will increase the quality and efficiency of lessons.

- 3. Digital modeling of pedagogical approaches.
- Distance learning platforms are not just technological tools, the key to success is the didactic approaches used in them. Therefore:
- "Flipped Classroom", "Blended Learning", "Collaborative Learning",
- It is necessary to integrate methods such as gamification and adaptive learning into the platforms.
- 4. Solving issues of technical infrastructure and information security at the institutional level
- Many problems are associated with limited technical resources. Therefore:
- It is necessary to establish separate digital learning centers at universities,
- Increase internet speed and create a continuous technical maintenance system,
- It is necessary to introduce safe, reliable and stable platforms for students and teachers.

This study mainly analyzed the technical and pedagogical aspects of the platforms. In future scientific work, it would be appropriate to conduct in-depth research in the following areas:

- The level of psychological adaptation of students to digital education;
- · Comparative analysis of the results of distance education and traditional education;
- Issues of digital social justice (digital equity);
- Opportunities for distance education across regions and their gender impact;
- The effectiveness of adaptive learning systems based on artificial intelligence.

Despite the wide range of distance learning opportunities for higher education institutions in Uzbekistan, systemic problems, methodological approaches, and insufficient development of digital culture prevent the full use of the real potential of these platforms. The experience of the Top 300 universities clearly shows what institutional, technological, and pedagogical strategies work successfully in this direction.

The development of distance learning platforms as a key element of digital transformation, not just a technical tool, is one of the important steps towards increasing the competitiveness of the education system of Uzbekistan.

References

- 1. Bates, T. (2019). Teaching in a Digital Age: Guidelines for designing teaching and learning. BCcampus OpenEd.
- 2. OECD (2021). The State of Higher Education: One Year into COVID. OECD Publishing.
- 3. Allen, I. E., & Seaman, J. (2017). Digital Learning Compass: Distance Education Enrollment Report. Babson Survey Research Group.
- 4. Anderson, T., & Dron, J. (2011). Three Generations of Distance Education Pedagogy. International Review of Research in Open and Distributed Learning, 12(3).
- 5. UNESCO (2020). COVID-19 and Higher Education: Today and Tomorrow. International Institute for Educational Planning.
- 6. Ministry of Higher Education, Uzbekistan (2023). Raqamli ta'lim tizimi holati bo'yicha hisobot.
- 7. QS World University Rankings (2024). Top 300 Universities. www.topuniversities.com
- Siemens, G. (2005). Connectivism: A Learning Theory for the Digital Age. International Journal of Instructional Technology and Distance Learning.