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Assessment of Digitalization in Higher Education: A Case Study of Turan University

Abstract

Object: This study evaluates the impact of digitalization on the operational performance, teaching, learning outcomes, and student experiences at Turan University.

Methods: Employing a mixed-methods approach, the research utilized a comprehensive questionnaire distributed to 86 students, alongside interviews with faculty to gauge the effectiveness of digital tools and platforms implemented across the university.

Findings: The analysis reveals a generally positive perception of digital infrastructure and educational practices among students. High levels of satisfaction were noted in areas such as the availability of digital resources in the library and the use of digital technologies by teachers. However, variations in satisfaction regarding accessibility to necessary digital devices and the cost implications of digital tools indicate areas needing improvement.

Conclusion: While Turan University has made significant strides in integrating digital technologies, the study identifies critical gaps in technological accessibility and financial aspects of digital usage. Addressing these gaps is essential for enhancing the overall effectiveness of digitalization efforts and ensuring equitable access to digital resources for all students.

Keywords: digitalization, higher education, Turan University, educational technology, Likert Scale, student experience, Online Learning.

Introduction

In the contemporary landscape of higher education, digitalization stands as a transformative force, reshaping the means through which educational content is delivered and engaged with by students. As institutions across the globe increasingly incorporate digital technologies into their academic and administrative frameworks, it becomes crucial to assess not only the extent of these integrations but also their impact on educational quality and accessibility. Turan University, recognized for its proactive approach to incorporating technology within its academic programs, provides a compelling case study in this regard.

This study aims to evaluate the effectiveness of digitalization at Turan University by exploring various facets such as infrastructure, tools for educational practice, and student engagement with digital platforms. The importance of this research lies in its potential to identify strengths and areas for improvement within the university's digital strategy, offering insights that could guide future enhancements. Moreover, the expediency of this assessment is underscored by the increasing reliance on digital solutions in education — a trend accelerated by global challenges such as the COVID-19 pandemic, which has necessitated a swift and efficient adoption of remote and hybrid learning modalities.

By analyzing student perceptions and feedback on the use of digital technologies at Turan University, this paper seeks to contribute to the broader discussion on how higher education institutions can effectively leverage digital tools to enrich learning experiences and outcomes. This introduction sets the stage for a detailed examination of how well Turan University has succeeded in integrating digital technologies into its educational ecosystem and highlights the implications of these efforts for students, faculty, and the institutional strategy at large.

Literature review

University digitalization encompasses the integration of digital technologies and strategic initiatives aimed at enhancing the functions of higher education institutions. This transformation involves the adoption of innovative technologies, restructuring organizational strategies, and implementing digital workflows to improve operational effectiveness, teaching quality, learning outcomes, and the overall student experience

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(McCusker & Babington, 2015; Hess et al., 2016). A significant shift towards digital learning platforms includes the incorporation of advanced technologies such as artificial intelligence and cloud computing, fundamentally altering how educational services are delivered and experienced.

McCusker and Babington (2015) argue that adopting new technologies necessitates a strategic overhaul that impacts multiple facets of the institution, including information management, processes, and human aspects. Similarly, Hess et al. (2016) describe digital transformation as a change in an organization's business model triggered by the adoption of emerging digital technologies, which results in structural alterations and the evolution of its products and services. This broad-based change is aimed at enhancing efficiency, creating added value, and aligning with evolving student expectations and industry standards.

The impetus for these transformations often stems from the demands of modern students who seek a flexible, personalized, and real-time educational experience (Hoskins, 2018; Yesner, 2020). According to research by Stokes et al. (2019), university leaders recognize that the core of digital transformation is centered on the students, with technology serving as a facilitative tool. The majority of these leaders believe that improving the student experience is the most critical outcome of digital initiatives, followed by meeting student demands.

Further emphasizing the student-centric approach, Prasanna and Choudhury (2013) suggest that student satisfaction is crucial as it serves as a potent advertisement for the university. Spies (2017) and Seres et al. (2018) note that the ultimate goal of digitalizing higher education should be to create innovative ways of working that focus on delivering user-centered services. This aligns with the broader notion that digitalization should improve business operations or create new revenue streams using digital technologies and data (Chapco-Wade, 2018; i-SCOOP, n.d.; Muro et al., 2017).

Assessing the maturity of digital initiatives is also vital as it helps to determine the digital readiness of an institution against industry standards and identify areas requiring enhancement (Kane et al., 2017; Đurek et al., 2018). This assessment is not only a gauge of current capabilities but also a roadmap for future development.

In summary, the literature underscores the transformative impact of digital technologies on higher education, highlighting the importance of strategic implementation and continuous evaluation to meet the dynamic needs of students and the educational sector. This review sets the stage for examining how Turan University's digitalization efforts compare with these broader trends and expectations in the realm of higher education.

Methods

This study was conducted to assess the level of digitalization at Turan University by capturing the perceptions and experiences of Bachelor students regarding the digital technologies and resources available to them. A cross-sectional survey design was utilized, targeting students from the 1st to 4th year across various disciplines.

The primary participants of this survey were Bachelor students enrolled at Turan University. The study targeted a diverse group of students from all four academic years to ensure a comprehensive understanding of the digitalization across the student body.

The data collection tool was a structured questionnaire designed to evaluate the extent and effectiveness of digital technology integration within the university. The questionnaire was prepared using Google Forms and was specifically designed not to record any identifying information about the respondents, ensuring their anonymity. The questionnaire consisted of 21 questions, each structured on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Also, questions divided into 6 different groups of indicators. These questions were crafted to gather insights on several dimensions of the university's digital environment (Table 1):

Table 1. Groups of indicators

№	Groups of indicators	Questions
1	2	3
1	Digital Infrastructure and Accessibility	The university has Wi-Fi internet access The university has computer classes with modern equipment The university has a library with electronic resources Students can receive all the necessary information about their studies electronically.
2	Digital Integration in Educational Practices	Teachers use digital technologies in the teaching process (presentations, videos, online tools) The university has distance learning systems (LMS Canvas) Students can take assignments and exams in electronic form The university provides the opportunity to study according to an individual educational trajectory

Continuation of Table 1.

1	2	3
3	Electronic Interaction and Communication	Students can receive all the necessary information about their studies in electronic form The university has an electronic document management system (ASU Turan) Students can communicate with teachers and staff of the university through electronic channels communications The university has a digital feedback system for students
4	Technological Accessibility and Support	All students have access to the necessary digital devices (laptops, tablets) The cost of studying at the university is not an obstacle to the use of digital technologies The university has programs to support students who do not have access to digital technologies
5	Digital Competence and Capacity Building	University students are proficient in computer and digital tools. The university has programs to train students in digital skills. University teachers have the skills to use digital technologies in education.
6	Student Perceptions and Recommendations	I am satisfied with the level of digitalization of the educational process at the university. I believe that the university uses digital technologies to improve the quality of education. I recommend other students to enroll to this university.
Note – compiled by the author		

Data collection was carried out over a period of two months, using online-based surveys to ensure maximum participation. The links to questionnaire was distributed during class sessions. Responses were encoded and analyzed using statistical software (Orange). Descriptive statistics, such as means and standard deviations, were calculated for each question to assess the general trends in student responses.

Results

The study involved a total of 86 Bachelor students from Turan University, spanning all years and a variety of academic disciplines. The collected data was analyzed using descriptive statistics to gauge the level of digitalization across the university. Here, we present the summarized results based on the responses to the 21 questions, each rated on a Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Table 2. Digital Infrastructure and Accessibility indicators analysis

№	Question	Mean	Mode	Median	Dispersion	Min	Max
Digital Infrastructure and Accessibility							
1	The university has Wi-Fi internet access	3.59	5	4	0.37	1	5
2	The university has computer classes with modern equipment	4.20	5	4	0.23	1	5
3	The university has a library with electronic resources	4.33	5	5	0.22	1	5
4	Students can receive all the necessary information about their studies electronically.	4.09	5	4	0.25	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Digital Infrastructure and Accessibility group indicators. The average rating for Wi-Fi internet access at Turan University is 3.59, suggesting a moderately favorable perception among students. The mode being 5 indicates that the most frequently given response was highly positive, reflecting that a significant subset of students are very satisfied with the Wi-Fi service. The median score of 4 further supports this positive trend. However, the dispersion value of 0.37, while relatively low, indicates that there is some variability in the responses. This variability suggests that while many students are satisfied, a few may be experiencing issues with Wi-Fi connectivity that could be addressed to enhance overall satisfaction.

Computer classes equipped with modern technology received a high mean score of 4.20, indicating strong student approval. The mode of 5 suggests that the most common response was very positive, with many students finding the computer facilities to be up-to-date and well-maintained. The median score of 4 aligns with these findings, indicating broad satisfaction. The relatively low dispersion of 0.23 highlights a consensus among the students about the quality and adequacy of the computer equipment, suggesting that the university is effectively meeting technological needs in this area.

The university's library with electronic resources received the highest approval with a mean score of 4.33. Both the mode and median scores are 5, indicating that the majority of students rate the electronic library resources very highly. This uniformity is underscored by the very low dispersion of 0.22, which shows that there is little variability in how students perceive the library's digital offerings. This indicates a highly successful integration of electronic resources in the library, meeting the academic needs of students effectively.

The accessibility of academic information electronically holds a mean score of 4.09, reflecting a positive student experience. With the mode at 5, it shows that many students find it very easy to access necessary information for their studies online. The median score of 4 supports this positive trend. A dispersion of 0.25, while still low, suggests a slight variation in responses, indicating that improvements could still be made to ensure that all students find it equally straightforward to access academic information electronically.

Table 3. Digital Integration in Educational Practices indicators analysis

Question number	Question	Mean	Mode	Median	Dispersion	Min	Max
Digital Integration in Educational Practices							
5	Teachers use digital technologies in the teaching process (presentations, videos, online tools)	4.45	5	5	0.17	3	5
6	The university has distance learning systems (LMS Canvas)	4.47	5	5	0.19	1	5
7	Students can take assignments and exams in electronic form	4.50	5	5	0.20	1	5
8	The university provides the opportunity to study according to an individual educational trajectory	3.43	5	3.50	0.41	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Digital Integration in Educational Practices group indicators. The utilization of digital technologies by teachers at Turan University, including presentations, videos, and online tools, received a high mean score of 4.45. This suggests a strong positive reception among students towards the digital integration within the teaching process. The mode and median both standing at 5 further demonstrate that the majority of students rate this aspect highly. The low dispersion of 0.17 indicates minimal variability in responses, pointing to a consistent satisfaction.

The implementation of distance learning systems, specifically the Learning Management System (LMS) Canvas, garnered a mean score of 4.47. Similar to the previous indicator, both the mode and median are at 5, indicating that the majority of students are very satisfied with the LMS provided by the university. The dispersion of 0.19, slightly higher than the previous but still low, reflects a strong consensus among students about the effectiveness and reliability of the LMS Canvas in supporting their learning needs.

The facility for students to complete assignments and exams electronically received the highest approval in this category with a mean score of 4.50. The mode and median are also at 5, reflecting that most students find the electronic submission and assessment processes to be highly satisfactory. The dispersion of 0.20, though slightly higher than the other digital teaching tools, remains low, indicating that students generally agree on the efficacy and convenience of electronic assessments.

The opportunity for students to study according to an individual educational trajectory received a mean score of 3.43, which is notably lower compared to the other aspects of digital integration. Although the mode is at 5, suggesting that some students are highly satisfied, the median of 3.50 and a higher dispersion of 0.41 indicate more variability in the responses. This suggests mixed feelings among the student body, with some students likely feeling that the university could improve how it facilitates personalized learning paths.

Table 4. Electronic Interaction and Communication indicators analysis

Question number	Question	Mean	Mode	Median	Dispersion	Min	Max
Electronic Interaction and Communication							
9	Students can receive all the necessary information about their studies in electronic form	4.13	5	4	0.27	1	5
10	The university has an electronic document management system (ASU Turan)	4.42	5	5	0.19	1	5
11	Students can communicate with teachers and staff of the university through electronic channels communications	4.20	5	5	0.25	2	5
12	The university has a digital feedback system for students	4.01	5	4	0.29	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Electronic Interaction and Communication group indicators. Students' ability to access all necessary information about their studies in electronic

form at Turan University is rated positively, with a mean score of 4.13. The highest frequency of responses is at the upper end (mode of 5), indicating that many students are very satisfied with the electronic accessibility of study-related information. The median score of 4 supports a general satisfaction trend. However, a dispersion of 0.27 and the full range of responses from 1 to 5 suggest that experiences vary among the student body, with some students facing challenges in accessing information electronically.

The university's electronic document management system (ASU Turan) receives high approval, as indicated by a mean score of 4.42. Both the mode and median at 5 demonstrate that the majority of students highly appreciate the effectiveness and efficiency of this system. The relatively low dispersion of 0.19 points to a consensus among students regarding the system's performance, further confirmed by the lack of lower end responses (minimum at 1).

The facility for students to communicate with teachers and staff through electronic channels is rated with a mean of 4.20. This high rating, along with a mode and median of 5, indicates that most students find the digital communication channels effective and reliable. The dispersion of 0.25, though not very high, suggests some variability in satisfaction, which is further evidenced by the minimum score of 2, indicating that improvements could still enhance this communication aspect.

The university's digital feedback system is evaluated with a mean score of 4.01, suggesting overall positive feedback. The mode at 5 and a median of 4 indicate that many students are satisfied with the feedback mechanisms in place. However, a dispersion of 0.29 and the range from 1 to 5 reveal that there are varying degrees of satisfaction, with some students possibly feeling that the feedback system could be more responsive or impactful.

Table 5. Technological Accessibility and Support indicators analysis

Question number	Question	Mean	Mode	Median	Dispersion	Min	Max
Technological Accessibility and Support							
13	All students have access to the necessary digital devices (laptops, tablets)	3.86	5	4	0.34	1	5
14	The cost of studying at the university is not an obstacle to the use of digital technologies	3.93	5	4	0.29	1	5
15	The university has programs to support students who do not have access to digital technologies	3.85	5	4	0.31	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Technological Accessibility and Support group indicators. The mean score for the accessibility of necessary digital devices like laptops and tablets for all students at Turan University is 3.86, indicating a fairly positive perception but with room for improvement. The mode at 5 suggests that a significant number of students are very satisfied with their access to digital devices. However, the median of 4 and a dispersion of 0.34, along with the full range of responses from 1 to 5, show that there is considerable variation in student experiences. This variability points to potential gaps in ensuring that all students have equal access to the necessary technology.

The impact of the cost of studying on the accessibility of digital technologies receives a mean rating of 3.93, suggesting that most students do not view costs as a prohibitive barrier to accessing digital resources. The mode at 5 and median at 4 indicate that many students find the costs associated with digital technology manageable. Nevertheless, the dispersion of 0.29 and responses as low as 1 highlight that for a subset of the student body, financial factors are a significant concern, potentially affecting their ability to fully utilize digital technologies.

The university's support programs for students who do not have personal access to digital technologies are rated with a mean of 3.85. This rating, while moderately positive, suggests that there is significant room for enhancement. The mode and median at 5 and 4, respectively, reflect that while many students are satisfied, the dispersion of 0.31 and the lowest rating at 1 indicate that these programs are not effectively reaching or meeting the needs of all students. This spread of responses suggests the need for a review and possible expansion of these support mechanisms to ensure they are more inclusive and effective.

Table 6. Digital Competence and Capacity Building indicators analysis

Question number	Question	Mean	Mode	Median	Dispersion	Min	Max
Digital Competence and Capacity Building							
16	University students are proficient in computer and digital tools.	4.29	5	5	0.23	1	5
17	The university has programs to train students in digital skills.	4.01	5	4	0.27	1	5
18	University teachers have the skills to use digital technologies in education.	4.08	5	4	0.26	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Digital Competence and Capacity Building group indicators. The proficiency of university students in using computer and digital tools is highly rated, with a mean score of 4.29. This suggests a strong capability among the student body in handling digital technology effectively. The most frequent response is 5, showing that many students consider themselves highly skilled. The median of 5 supports this view of high competence among students. The relatively low dispersion of 0.23, along with a minimum score of 1, indicates that while the vast majority are comfortable with digital tools, there are outliers who may require additional support.

The availability and effectiveness of programs to train students in digital skills have a mean score of 4.01, indicating a generally positive reception. The mode of 5 and a median of 4 suggest that most students appreciate these training programs, though the dispersion of 0.27 and the full range of scores from 1 to 5 reflect some variability in how students perceive these offerings. This variability might highlight areas where the training programs could be tailored to better meet diverse student needs or to cover gaps in digital skillsets.

The competence of university teachers in using digital technologies in education receives a mean score of 4.08, showing a good level of skill among faculty members. The mode at 5 and a median of 4 indicate that most students are satisfied with their teachers' ability to integrate digital tools into the learning process. However, the dispersion of 0.26 and responses ranging from 1 to 5 suggest that while many teachers are adept at using digital technologies, there may be some inconsistency, with a few educators possibly lacking the necessary skills or not utilizing digital tools effectively in their teaching.

Table 7. Student Perceptions and Recommendations indicators analysis

Question number	Question	Mean	Mode	Median	Dispersion	Min	Max
Student Perceptions and Recommendations							
19	I am satisfied with the level of digitalization of the educational process at the university.	4.10	5	4	0.25	1	5
20	I believe that the university uses digital technologies to improve the quality of education.	4.22	5	5	0.22	1	5
21	I recommend other students to enroll to this university	3.74	5	4	0.33	1	5
Note – compiled by the author							

The table presented above examines the results of the analysis of Student Perceptions and Recommendations group indicators. The overall satisfaction with the level of digitalization at Turan University is assessed with a mean score of 4.10, indicating that students generally feel positively about the integration of digital technologies in the educational process. The mode of 5 suggests that the most common response is very positive, with many students highly satisfied. The median of 4 supports a general trend of approval, though a dispersion of 0.25 and the range of scores from 1 to 5 point to some diversity in opinion. This variation highlights that while most students are content with the digitalization efforts, there are some who may feel that improvements are necessary.

Students' beliefs that digital technologies enhance the quality of education have a mean score of 4.22, reflecting a strong affirmative perception. Both the mode and median at 5 emphasize that a significant por-

tion of the student body highly values the contributions of digital technologies to their educational experience. The dispersion of 0.22 indicates a relatively high consensus among students on this positive impact, though the minimum score of 1 reveal that not all students share this view.

The likelihood of students recommending Turan University to others based on its digitalization has a mean score of 3.74, which is somewhat lower compared to other indicators. The mode at 5 shows that many students would recommend the university, yet the median of 4 coupled with a higher dispersion of 0.33 suggests more variability in this sentiment. The range from 1 to 5 indicates a broad spectrum of opinions, from strong endorsements to significant reservations, suggesting that while many students are enthusiastic advocates, others may have concerns that could influence their recommendations.

Discussions

The student responses from Turan University provide a valuable gauge of the effectiveness of digital technologies in enhancing educational experiences. While overall sentiment is positive, variations in satisfaction levels invite a deeper examination of how digital resources are implemented and perceived across different student segments.

The data indicates a strong belief among students that digital technologies enhance the quality of education, with an average rating of 4.22 and a mode of 5. This reflects well on the university's strategic integration of technologies such as LMS Canvas and digital library resources, which are critical in modern education frameworks. However, the minimal score of 1 suggests that there are occasional but significant discrepancies in how digital resources meet educational needs. This might be due to inconsistent usage of digital tools among faculty or possibly technical issues that hinder their effective application in some courses. Enhancing faculty training and ensuring robust technical support can address these inconsistencies, fostering a more uniformly positive educational impact.

Although the general satisfaction with digitalization efforts is high (mean of 4.10), the presence of lower ratings and a dispersion of 0.25 indicates diverse experiences among the student body. Such diversity may stem from varying expectations about digital accessibility and utility, or disparities in how digital tools are deployed across different disciplines. It is crucial for the university to identify specific areas where digital services may fall short and work towards a more inclusive digital environment. Conducting focused group discussions or surveys to pinpoint these areas can help tailor digital solutions that better cater to all student needs.

The recommendation to prospective students based on digital offerings has the lowest average score (3.74) among the indicators, pointing to potential reservations about endorsing the university purely based on its digital capabilities. While many students are satisfied (mode of 5), the broader range of responses and a higher dispersion suggest that the decision to recommend involves factors beyond mere satisfaction with digital tools. These could include considerations of overall academic quality, cost-effectiveness, and perhaps the integration of digital tools with career-preparatory resources. Turan University might benefit from integrating digital strategies with career development programs and ensuring that digital tools are not only advanced but also relevant to the professional aspirations of students.

Conclusions

The assessment of digitalization at Turan University reveals a landscape where digital technologies significantly enhance the educational environment, as evidenced by generally high levels of student satisfaction across several key metrics. Students largely appreciate the integration of digital tools and platforms, which have been shown to improve the accessibility of resources and the quality of education. Particularly, the strong endorsements of digital tools in the teaching process and the digital infrastructure of the university highlight successful aspects of the university's digital strategy.

However, the findings also illuminate areas requiring attention to maximize the potential of digital technologies. Notably, the variability in satisfaction concerning the recommendation of the university based on its digitalization efforts suggests that while many students are pleased with the digital resources, there is a critical need for enhancements that align more closely with student expectations and academic outcomes. This includes addressing the gaps in technological support and accessibility, particularly for students who may not have easy access to digital devices or those finding the cost of digital technology a barrier to its effective use.

To further elevate its status as a digitally advanced institution, Turan University should consider implementing more robust support systems for students lacking digital access, enhancing training programs for both students and faculty to ensure proficient use of digital tools, and integrating student feedback more di-

rectly into the ongoing development of digital strategies. Such initiatives will not only improve the effectiveness of digital resources but also enhance the overall academic experience, thereby increasing the likelihood of positive recommendations from its student body.

To enhance the digital capabilities of Turan University and align more closely with student expectations and academic outcomes, several key recommendations are proposed:

Establish a Technology Access Program: Turan University should create a technology access program that provides students with subsidized digital devices and technical support. This program would require an initial budget allocation of approximately 20 million tenge, aimed at purchasing and maintaining digital devices for loan or subsidized sale. The outcome of this initiative would likely be increased access to digital tools for economically disadvantaged students, resulting in improved academic engagement and performance.

Implement Comprehensive Digital Literacy Training: The university should introduce comprehensive training programs for both students and faculty to ensure proficient use of digital tools. An estimated budget of 4 million tenge per year would cover the development and delivery of these training sessions, including hiring external experts and creating online resources. The expected outcome would be a more technologically adept university community that can fully leverage digital resources for educational excellence.

Develop an Integrated Student Feedback System: A system should be established to integrate student feedback directly into the ongoing development of digital strategies. This would involve an initial investment of 2 million tenge to develop a digital feedback platform and process, including regular surveys and focus groups. The potential outcome is a more responsive and adaptive digital strategy that aligns with student needs and expectations, thereby enhancing overall satisfaction and the likelihood of positive recommendations.

Regular Assessment of Digital Resource Effectiveness: The university should regularly monitor and evaluate the effectiveness of its digital resources. A budget of 500 thousand tenge annually should be allocated for this assessment, which would fund data collection, analysis, and reporting tools. This would help the university in making informed decisions to continuously improve digital resource effectiveness, thereby enhancing both student satisfaction and academic results.

Promote Digital Inclusivity: An initiative to promote a culture of digital inclusivity should be launched, with a focus on ensuring that all students are aware of and can benefit from the digital resources available. A budget of 1 million tenge would support marketing and outreach efforts to communicate the benefits of digital resources across campus. The expected outcome would be an increase in the use of digital resources across the entire student body, leading to a more inclusive and equitable academic environment.

Publicize the benefits and opportunities provided by the university's digital resources through various channels to ensure all students are aware and can take advantage of them.

In sum, Turan University has made commendable strides in incorporating digital technologies into its educational framework. Continued focus on refining these efforts to address uncovered disparities will be vital in fostering an inclusive, effective, and highly regarded digital learning environment.

References:

Chapco-Wade, C. (2018). Digitization, digitalization, and digital transformation: What's the difference? Medium. Retrieved from https://medium.com/@colleenchapco/digitization-digitalization-and-digital-transformation-whats-the-difference-eff1d002fbdf

Đurek, V., Kadoic, N., & Begicevic Redep, N. (2018). Assessing the digital maturity level of higher education institutions. 2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018 — Proceedings, July 2015, 747–752. https://doi.org/10.23919/MIPRO.2018.8400126

Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, *15*(2), 123–139. https://doi.org/10.1108/10878571211209314

Hoskins, P. (2018). Transforming Transformation in Higher Education. Vistage. Retrieved July 9, 2021, from https://www.linkedin.com/pulse/transforming-transformation-higher-education-paul-hoskins/

i-SCOOP. (n.d.). Digitization, digitalization, digital and transformation: the differences. I-SCOOP. Retrieved August 17, 2020, Retrieved from https://www.i-scoop.eu/digital-transformation/digitization-digitalization-digital-transformation-disruption/

Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2017). Achieving digital maturity. Adapting your company to a changing world. MIT Sloan Management Review. Retrieved from https://sloanreview.mit.edu/projects/achieving-digital-maturity/

McCusker, C., & Babington, D. (2015). The 2018 digital university. Staying relevant in the digital age. Pricewaterhouse Coopers, 1–20. Retrieved from https://www.pwc.co.uk/assets/pdf/the-2018-digital-university-staying-relevant-in-the-digital-age.pdf

Muro, M., Liu, S., Whiton, J., & Kulkarni, S. (2017). Digitalization and the American Workforce. Brookings, November, 1–60. Retrieved from https://www.brookings.edu/research/digitalization-and-the-american-workforce/

Prasanna, P., & Choudhury, S. (2013). Transformation Strategies for Higher Education. Cognizant, november, 1–9. Retrieved from https://www.cognizant.com/InsightsWhitepapers/Transformation-Strategies-for-Higher-Education.pdf

Seres, L., Pavlicevic, V., & Tumbas, P. (2018). Digital Transformation of Higher Education: Competing on Analytics. International Technology, Education and Development Conference (INTED), 1(March), 9491–9497. https://doi.org/10.21125/inted.2018.2348

Spies, M. (2017). Digital Transformation in Higher Education. Navistas Ventures. Retrieved from https://medium.com/navitas-ventures/digital-transformation-in-higher-education-17688f19fd59

Stokes, P., Baker, N., DeMillo, R., Soares, L., & Yaeger, L. (2019). The Transformation-Ready Higher Education Institution. How Leaders Can Prepare For and Promote Change. Huron. Retrieved April 16, 2021, from https://www.huronconsultinggroup.com/insights/transformation-ready-higher-education-institution

Yesner, R. (2020). The Future of Higher Education. Digital Transformation is Critical to Learner and Institution Success. IDC, August. Retrieved from https://www.ecampusnews.com/files/2020/10/IDC_The-Future-of-Higher-Education.pdf

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Аңдатпа:

Мақсаты: Бұл зерттеу цифрландырудың Тұран университетіндегі операциялық көрсеткіштерге, оқытуға, оқу нәтижелеріне және студенттердің тәжірибесіне әсерін бағалайды.

Әдісі: Аралас әдістемелік тәсілді қолдана отырып, зерттеу 86 студентке таратылған кешенді сауалнаманы, сондай-ақ университетте енгізілген цифрлық құралдар мен платформалардың тиімділігін бағалау үшін оқытушылармен жүргізілген сұхбаттарды қамтыды.

Қорытынды: Талдау көрсеткендей, студенттер арасында цифрлық инфрақұрылым мен білім беру тәжірибесі туралы жалпы оң көзқарас қалыптасқан. Кітапханадағы цифрлық ресурстардың қолжетімділігі және мұғалімдердің цифрлық технологияларды пайдалануы сияқты салаларда қанағаттанушылықтың жоғары деңгейі атап өтілді. Дегенмен, қажетті цифрлық құрылғылардың қолжетімділігіне және цифрлық құралдарды пайдаланудың қаржылық аспектілеріне қанағаттанудағы айырмашылықтар жақсартуды қажет ететін салаларды көрсетеді.

Тұжырымдама: Тұран университетінің цифрлық интеграциядағы елеулі жетістіктеріне қарамастан, зерттеу технологияның қолжетімділігі мен цифрлық ресурстарды пайдаланудың қаржылық аспектілеріндегі маңызды олқылықтарды анықтайды. Бұл олқылықтарды жою цифрландыру жұмыстарының жалпы тиімділігін арттыру және барлық студенттер үшін цифрлық ресурстарға тең қолжетімділікті қамтамасыз ету үшін маңызды.

Кілт сөздер: цифрландыру, жоғары білім, Тұран университеті, білім беру технологиясы, Лайкерт шкаласы, студенттік тәжірибе, онлайн-оқыту.

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Оценка цифровизации в высшем образовании: на примере Университета «Туран»

Аннотация:

Цель: В данном исследовании оценивается влияние цифровизации на операционные показатели, обучение, результаты обучения и опыт студентов в Университете «Туран».

Методы: Используя смешанный методический подход, исследование включало комплексную анкету, распределённую среди 86 студентов, а также интервью с преподавателями для оценки эффективности цифровых инструментов и платформ, внедрённых в Университете.

Результаты: Анализ показывает, что среди студентов в целом положительное восприятие цифровой инфраструктуры и образовательных практик. Высокий уровень удовлетворённости был отмечен в таких областях, как доступность цифровых ресурсов в библиотеке и использование цифровых технологий преподавателями. Однако различия в удовлетворённости доступностью необходимых цифровых устройств и финансовыми аспектами использования цифровых инструментов указывают на области, требующие улучшения.

Выводы: Несмотря на значительные успехи Университета «Туран» в интеграции цифровых технологий, исследование выявляет критические пробелы в доступности технологий и финансовых аспектах использования цифровых ресурсов. Устранение этих пробелов необходимо для повышения общей эффективности усилий по цифровизации и обеспечения равного доступа к цифровым ресурсам для всех студентов.

Ключевые слова: цифровизация, высшее образование, Университет «Туран», образовательные технологии, шкала Лайкерта, опыт студентов, онлайн-обучение.