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Digitalization in higher education institutions: the case of Selcuk University and Matej Bel University

Digitalizácia na vysokých školách: príklad Univerzity Selcuk a Univerzity Mateja Bela

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Abstract: The revolutionary progress in technology has started a transformation process that is reshaping the world. The aim of this transformation, which has digitalization at its center, is to facilitate human life and increase productivity by using the latest technologies. In order to benefit from the innovations of the digital age, many other fields such as transportation, education, health and tourism have become involved in this transformation process. In this context, COVID-19 accelerated the digital transformation in higher education and caused the intensive adoption of new technologies.

In the light of this information, the aim of this research is to analyze how the students at Selçuk University and Matej Bel University perceive digitalization of their university. At the same time, it identifies the challenges and benefits of digitalization from the students and universities point of view. The opinion of students on the digital transformation process will be able provide a view of both the progress made by universities and what is needed in the future.

Key words: *Digitalization. Higher Education Institutions. University Students.*

JEL Classification: A10. I20. I21. I23. O33.

Introduction

Digitalization means organizational transformation process through adopting digital technologies (Sebastian et al, 2017). A powerful field, digitalization that covers several work and daily-life components and shows continuity has been one of the most essential trends transforming society and also sectors in the society especially in the last decade. This trend forces almost all sectors to utilize technological opportunities and urges society to develop the necessary knowledge for keeping up with its development. One of the fundamental fields that digitalization affects is higher education institutions (HEI) as it has been affected more than ever in the teaching and learning process. In this context, digitalization offers an opportunity

and at the same time a challenge for HEIs. HEIs cannot keep up with the development of digital technologies for various reasons including the unawareness of competing methods, insufficiencies in working style combined with new technology, the adoption of new technologies at an undesirable level, having a skeptical approach about reliability and continuity of digital services and cloud technologies, having old technical infrastructure and technical support team who does not know new technologies, strict institutional policies and so forth (https://www.pwc.co.uk/2018university, 2018). In the light of this information, the aim of this study is the digitalization in HEI that has gained importance due to the COVID- 19 pandemic from the comparative perspectives of Selcuk University (SU) and Matej Bel University in Banska Bystrica (MBU) students. The research question of this paper is how the students at Selçuk University and Matej Bel University perceive digitalization of their university thus gaining an understanding of the level of digitalization for both institutions. Firstly, within the scope of this study, a literature review provides an overview of sources and research. Secondly, a questionnaire was administered to 251 students from SU and MBU in January-March 2022 and the obtained data were analyzed under seven social/technical dimensions. In this study, a maximum variation sampling technique was used while determining the research method. A five-point Likert Scale was used in 29 questions, one closed question (Yes/No) and 2 multiple choice questions were given to students in a questionnaire.

1 Literature review: digitalization in higher education institutions

Digitalization is present in all economic sectors, including education. It influences not only the equipment of HEIs, but also the way of teaching. Even though the majority of universities followed the new trends in the past years, the ongoing pandemic accelerated this trend. At the same time, digitalization provided a solution to the lack of readiness for university campus closure and sudden suspension of physical onsite visits during the pandemic (Hou et al, 2022). This has all challenged the classical teaching methods and questioned what has to be taught (Davies, 2009; Chasanidou et al, 2014).

While digital tools and applications can provide solutions for difficulties that HEIs face, HEIs cannot use the full potential of digital technologies. One of the most important reasons for this is that students, instructors and public employees are not able to adapt to new technologies. Therefore, all the stakeholders in HEIs should undergo serious preparation in the digital transformation process. The most important stakeholder in this process are students (Atas & Gunduz, 2020). Within this framework, students' perception of university digital processes and their own digital skills carry great importance. According to Füzi et al (2022),

HEIs were forced to focus on their students, their teachers, and their internal processes in order to continue the provision of education in a new digital context. Teachers and students have had to adapt to a new teaching methodology, and many of them were not sufficiently prepared. Some teachers were not familiar with information and communication technologies, and some students did not have adequate resources to follow online teaching and had problems concentrating and adapting to this method of teaching (Rehman et al, 2021; Cifuentes et al, 2020; Maican & Cocorada, 2021).

Like in other sectors, the "COVID-19 pandemic emphasized global connectivity, vulnerability and inequities" (Nkengasong, 2021). Education has changed dramatically with a distinctive rise of online learning where teaching is done remotely on digital platforms. Extant review of literature shows that the closure of schools due to COVID-19 impacted 1,198,530,172 learners in 186 countries (UNESCO, 2020). The 2nd IAU Global Survey Report on the impact of COVID-19 on higher education (Jensen et al. 2022) concludes that higher education institutions have shown resilience but also faced major financial concerns, delays in research activities, overworked staff and a slowdown in the recruitment of students.

HEIs have had to rapidly evolve their digital strategies and the digital literacy and skills of their staff in order to respond to the current demands for online delivery and global digital connectivity (Webb, McQuaid, William & Webster, 2021). Digitalization can expand learning spaces and promote improved access to knowledge and education individually and globally. Open education and open educational resources, among others, endorse this (Hofhues, 2020; Kerres, 2020; Russ & Hamidi, 2021, Pearson & Koppi, 2002). On the contrary, some researchers comment that digitalization in higher education is at an early stage, because despite the teachers' will and use of digital tools to innovate and differentiate teaching, there are no significant changes in students' learning (Thoring, Rudolph & Vogl 2017). Technology has the potential to interweave the universities' competencies of teaching and administration. Because universities operate in a more and more competitive environment, they need to seek efficient processes (Adler & Harzing, 2017).

2 General Information about MBU and SU

MBU offers high quality education in the field of humanities and social sciences. The university creates opportunities for connecting both study and practice through innovative mentoring, volunteering, informal education and community work. Digitalization (together with the sustainable development and informatization) is one of the MBU priorities as is stated in the strategic document "Long-term plan of MBU development for the period 2021-2026".

To be able to fulfil the aims of this long-term plan, various tools and quantitative and qualitative indicators were proposed. E.g., tool (in long-term plan above) number V.1.1 Continuous improvement of existing information systems in order to increase their efficiency, user-friendliness, availability and functionality. Digitalization of chosen internal processes in order to decrease the so-called "paper agenda". This will be monitored by regular survey of staff satisfaction with internal university processes. At the same time the number of "digitalized" documents will be monitored. Moreover, tool number V.1.2 (from the long-term plan) is focused on the optimization of existing information systems in order to make a transition to the unified information system to efficiently manage all levels of university. Additionally, the digitalization of the scientific infrastructure is another crucial part for universities. At MBU, it means e.g., to expand the number of licenses for scientific databases or to digitalize MBU library information sources.

Similarly, all 6 faculties, which are part of MBU, follow this "digitalization" line. One of the leaders in digitalization is the Faculty of Economics which formulated their ambitions in this field in the strategical document for the period 2021-2026 "Long-term plan of development". One of the aims of this document is to implement aspects of digitalization, computerization and automatization of all processes to make them more effective and to decrease the amount of internal "paper" documents. The importance of digitalization topic is underlined by a creation of a separate portfolio where one of the vice-dean focuses on development and digitalization. There are two main activities which need to be implemented in the next seven years as were mentioned in the document above. The first one has the ambition to make digitalization a majority of internal administrative processes in order to facilitate effectiveness. At the same time, the aim of this activity is to improve the working environment of all pedagogical and non-pedagogical staff at the Faculty of Economics. The second activity is a focused on the digitalization of the feedback from students, employers, and future graduates to follow their satisfaction with the quality of study at this faculty.

The pandemic had a huge impact not only on employees' work, but also on the way of students´ teaching. Even before the pandemic, we started to implement on-line teaching to some extent, supported with an already implemented e-learning systems, e.g. the Moodle system at MBU where the students can find all materials for their study. On the one hand, there were some teachers who started for the first time to use this system during the pandemic, on the other, many teachers were already quite advanced during that time which helped them to adapt faster and more flexibly to the changed conditions. During the pandemic this trend accelerated in an impressive way. At the university level, in the first year of pandemic in 2020 the use of MS

Teams was introduced to all faculties to have a common platform to manage the on-line teaching to fulfil that time safety restrictions and minimize the contact among university staff and students. In the first months of the pandemic there were separate trainings organized for MBU staff to learn how to use this system. Consequently, additional investments into IT hardware at MBU was necessary to do to be able to fully switch to the on-line working and teaching environment.

The ongoing pandemic underlined the importance and inevitability of digitalization at both university and faculties levels. Of course, it required the additional financial resources. In the light of the reducing university budget in the last years, to cover the additional digitalization costs was and is still quite challenging.

SU has a substantial place among higher education institutions in Turkey. Especially education and research infrastructure, academic staff and number of students are important areas in SU. SU has 46 years of higher education experience and capacity, it has also been a pioneer in the expansion and improvement of the quality of higher education processes, both regionally and nationally (SU Internal Report, 2020).

Digitalization is one of the basic strategies of SU. The primary fields about digitalization are listed: (SU Internal Report, 2020).

- Completing the distance education infrastructure to use updated and novel technologies.
- Varying the distance education activities with the lifelong learning processes within the university infrastructure.
- Configuring the program and quotas in line with the demands.

The aim of the digital transformation is to provide the realization of educational activities through distance education. In order to achieve this goal, The Distance Education Application and Research Center (UZEM), which was founded long before the pandemics (2012) and continuously developing its substructure, implements its hybrid education and exam models during the pandemics time course and realizes improvement activities in line with the instant satisfaction indicators via Survey System (anket.selcuk.edu.tr). (SU Internal Evaluation Report, 2020). During COVID 19, SU started working on establishing a strong distance learning infrastructure.

Within this framework, the greatest aim of SU is to utilize the benefits of digital age and transformation and make international improvements in order to increase the teaching-learning quality. SU has been carrying out some works aiming to maximize the digital competence and potential of a smart campus. Furthermore, SU puts great effort in offering the latest digital

services for students. When key performance indicators are considered, the completing rate of digital transformation and materials has been determined as 52%.

Adding necessary competences in digital age to curriculum, managing all the institutional correspondence and communication online via e-mail or e-signature, reaching online catalog system on or outside of campus, having an online cafeteria system are among the clear indicators of giving importance to digitalization.

3 Research methodology

In this study and based on the literature review, a questionnaire method was applied to students of MBU and SU in order to reveal students' views on the issue of digitalization in their universities. In this study, a maximum variation sampling technique was used to determine the research method.

The questions determined in line with the theoretical framework of the research were prepared in English and Turkish and transferred to Google Forms and was sent to the students via email. A Five Likert Scale was used in 29 questions to discuss how the students perceive digitalization of their university with a range from Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5). The data was obtained between January and March 2022. There is one closed question (Yes/No) and 2 multiple choice questions were asked to the students.

The obtained data within the scope of the study was analyzed with the SPSS program for data analysis and institution comparison.

In the study, 251 completed questionnaires were completed, of which 58.6% (147) of respondents were female and 41.4% (104) male. None indicated a third gender. There wasn't any significant influence of gender on the students' perceptions.

According to the study, 94,4% of the students are at a bachelor's level and 5.6% at a master's level.

As it can be seen from Table1 the questionnaire included 30 statements related to major fields. In order to prevent bias, the statements were not introduced in the questionnaire to the major fields. The table also shows the Mean and Standard Deviation values. Table 1 shows that the mean value "Transformation of the Teaching Methods and Services" dimension is lower than the other dimensions in SU (mean=3,26). "Trust" dimension had the highest mean value at SU (Mean=3,61). The lowest mean value was "Transformation of the Teaching Methods and Services" at MBU (Mean=3,37) The highest mean values are "Trust" and "Strategy" at MBU (Mean=3,75). Therefore, it is understood from the result that the views of the students at both

universities about "Transformation of the Teaching Methods and Services" of their universities are negative compared to other dimensions.

It is understood from the results that both university students trust their universities about data protection and privacy.

Table 1 Mean Values and Standard Deviation

Statements and Dimensions	MBU Mean	SU Mean	MBU Std, Dev.	SU Std, Dev.
1.Strategy	3.75	3.29		
My university management supports the digital transformation at the University	3.90	3.37	0.69	0.94
My university has a clear strategy and vision for digitalization of learning and teaching	3.60	3.22	0.78	0.98
2.Trust	3.75	3.61		
I can control the data that is stored about me	3.40	3.45	1.05	1.14
I trust my university when using the digital platform	3.70	3.59	0.83	0.96
My university takes into account data protection while developing the digital policies,	4.17	3.80	0.92	1.11
3.Transformation of the Teaching Methods and Services	3.37	3.26		
My university continues using digital methods for teaching and services and still improving them	4.02	3.69	0.84	1.04
The changed form of the course after the distance learning process negatively affects my learning success	2.92	3.19	1.24	1.43
I don't see any advantages provided by the digital communication platform (MS teams, zoom) in the courses	2.01	3.00	1.05	1.40
My university provides me with highly valuable information and support about my digital learning	3.62	3.36	0.94	1.24
I have the impression that my university's internal processes have been digitalized during the pandemic	3.84	3.16	0.76	1.09
Technological capacity of my university is quite sufficient to adapt to challenges in current digital learning	3.84	3.21	0.74	1.04
4.Cultural Change	3.59	3.53		
The learning culture at the university has not changed due to digitalization	3.05	3.46	1.08	2.73
My university strives to constantly learn and get better in how to transform digitally	3.77	3.52	0.84	0.97
In my university, the openness to new ideas in teaching is prevailing	3.63	3.61	0.90	1.05
The teaching staff can easily figure out new technologies and applications	3.50	3.64	0.94	1.01
The administrative staff can easily figure out new technologies and applications	3.70	3.35	0.95	1.10
I think that staff should receive special training on digital education	3.92	3.61	0.89	1.10
5.Resources of the University	3.73	3.37		
I am satisfied with my university's measures to the pandemic	4	3.43	0.87	1.23
My university had enough resources (time, money, IT staff) at the beginning of the pandemic for establishing digital learning	3.84	3.39	0.84	1.08
My university provides support in order to advance digital skills of the staff	3.41	3.35	0.73	0.99
During the pandemic, important technical infrastructures have been carried out for digital learning	3.73	3.38	0.91	1.01
I am satisfied with my university's support creating electronic teaching materials during the pandemic	3.67	3.31	1.06	1.12
6.Digital Skills of the student	3.43	3.60		
I can easily figure out new technologies and applications	2.44	3.93	1.22	1.11
I need technical support while using the digital tool	2.57	3.04	1.35	1.26
I need practical training while adapting new technology	4.04	3.53	1.05	1.20
I am sufficiently equipped to follow the online courses	4.04	3.72	1.05	1.18
The pandemic could positively affect my digital skills	4.08	3.82	0.66	1.05
7.Future Development				
Digital learning will increase the quality of education compared to past	3.71	3.44	1.06	1.26

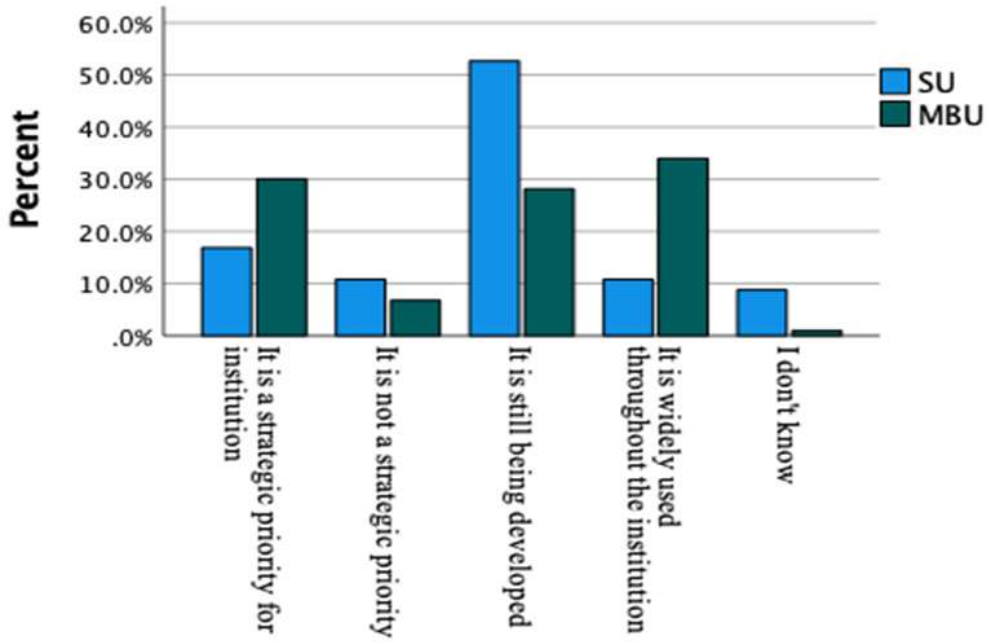
Source: own elaboration

This study is relevant to the students' view of the digitalization of higher education institutions. The study is limited to the opinions of 251 students from SU and MBU. For this reason, although it is not possible to generalize, contributions were made to obtaining important data in the evaluated headings.

4 Finding and results

4.1 The students' views towards "digital strategies" of universities

HEIs need to take accurate steps for changing student profiles in the digital transformation process. Digital transformation should cover all the vision and strategies of the institution (The 2018 Digital University, 2016; Taskıran, 2017). Therefore, HEIs should reflect the digitalization matter to the whole institution with a holistic perspective and they need to consider this matter as a strategic priority. University administration has a critical role in determining the digitalization strategy (Reid, 2014). In the extent of the study, questions were asked about how students evaluate the digital strategies of their university. As seen from Graph 1, more than half of SU students (52%) shared the view of the university digital position as "It's still being developed" whereas 34% of MBU students stated their views as "It's widely used throughout the institution" and 30.1% stated "It's a strategic priority for institution". It can be said that Slovakian students has more positive opinions than SU students about their universities' digitalization process.



Graph 1How would you describe your institution's position towards digitally enhanced learning and teaching?
Source: own elaboration

When the question of "My university management supports the digital transformation at the university" related to the digitalization strategy of the universities is considered, it is seen that 48% of SU students do not have any opinion about the subject. As for MBU students, 53.4% of them agree with the statement. In this dimension, the question of "My university has

a clear strategy and vision for digitalization of learning and teaching" was posited to the students. 47.3% of SU students stated that they do not have any opinion about the subject while 44.7% of the students agreed with the statement. When the results are evaluated, it is seen that MBU students have knowledge about their university digitalization strategies and positive opinions; on the other hand, SU students are seen to be more indecisive. The dimension having the highest average of MBU students' answers is seen as a "Strategy".

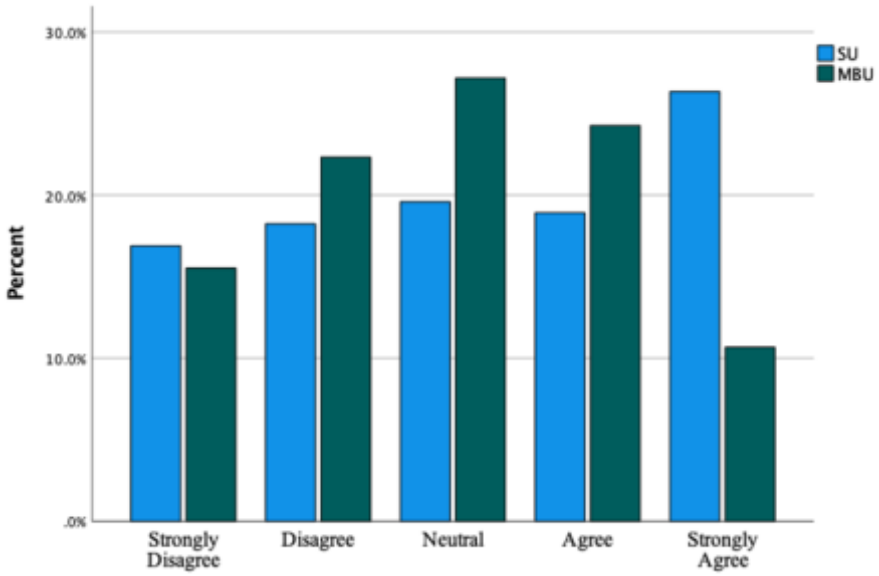
4.2 The students' views towards "trust" in their university digitalization

The fact that information technologies develop fast and the fact that individuals and institutions process data at an important level in daily life has increase the need for protecting personal information (Bilir, 2021). Within this framework, information and personal data security is one of the crucial subjects that HEIs should pay attention especially in digital transformation process. Questions were asked to the students about their trust perceptions of their universities' digital transformation. 35.8% SU students stated that they do not have any opinion about the statement of "I can control the data that is stored about me" while 25% of them agreed with the statement. According to MBU students, 33% of them agreed with the statement while 26.2% stated that they disagreed. When the results are evaluated, the rates of both universities are seen to be close. Secondly, the statement "I trust my university when using the digital platform" was asked to the students. 44.6% of the students stated that they do not have any opinion but 69.6% stated that they agreed. MBU students have similar rates but it is relatively higher than SU rates. 39.8% say that they do not have any opinion whereas 56.3% agreed. Finally, the statement "My university takes into account data protection while developing the digital policies" was posited, 62.9% of SU students and 80.6% of MBU students stated their agreements. As also understood from the results, both university students find the personal data security precaution sufficient and feel safe.

4.3 The students' views towards "transformation of the teaching methods" and "transformation of service"

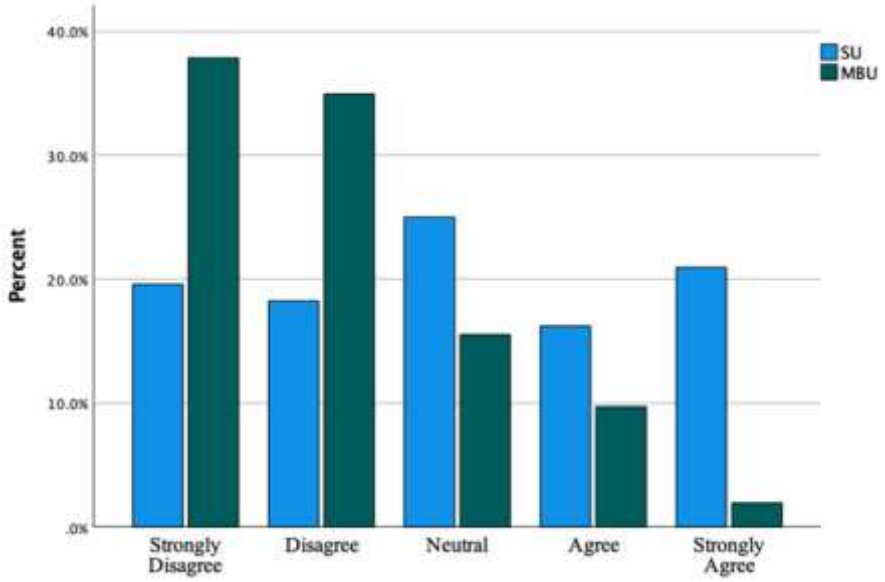
With the digital transformation process, HEIs try to keep up with the digital age by changing teaching materials and methods. The first question asked to the students about their views towards transformation of the teaching materials in universities is: "My university continues using digital methods for teaching and services and still improving them". 60.8% of SU students stated that they agreed and MBU students have a higher rate. 77.7% of the students stated they agreed. Another statement under this dimension was: "The changed form of the

course after the distance learning process negatively affects my learning success". As seen in Graph 2, the student views vary towards this statement. Some of the students stated that digital teaching negatively affected their learning while others disagreed. Many had no opinion about this statement.



Graph 2 Distance learning process negatively affects my learning success
Source: own elaboration

As was already mentioned above, COVID-19 has been one of the most crucial crises accelerating digital transformation in higher education specifically due to the disruption of in-person education leading to forced online education and the use of digital communication platforms. Within this context, the students' views were queried through this statement: "I don't see any advantages provided by the digital communication platform (MS teams, Zoom, etc.) in the courses. As seen in Graph 3, most of the students clearly said that digital communication platforms had an advantage.



Graph 3 I don't see any advantages provided by the digital communication platforms (MS teams, zoom, etc.) in the courses
Source: own elaboration

In this context, another statement read: "My university provides me with highly valuable information and support about my digital learning. 49.7% of SU students and 54.3% of MBU students expressed their positive views about this statement. 57.4% of SU students described the university digital services as inefficient whereas a great number of MBU students (90.3%) found their university services efficient during the pandemic period. As such, universities accelerated their adoption of online education. In this extent, the statement "I have the impression that my university's internal processes have been digitalized during the pandemic" with 41.9% of SU students expressed that they do not have any opinion. As for MBU students, 65.1% of them stated the internal processes of their universities were digitalized during pandemic.

The last statement posited: "The technological capacity of my university is quite sufficient to adapt to challenges in current digital learning". 46.3% of SU students stated that they do not have any opinion whereas 72.8% of MBU students agreed. As mean and standard deviation values are examined in Table 1, it is seen that MBU obtained the lowest value (mean= 3.37) from the questions under this dimension.

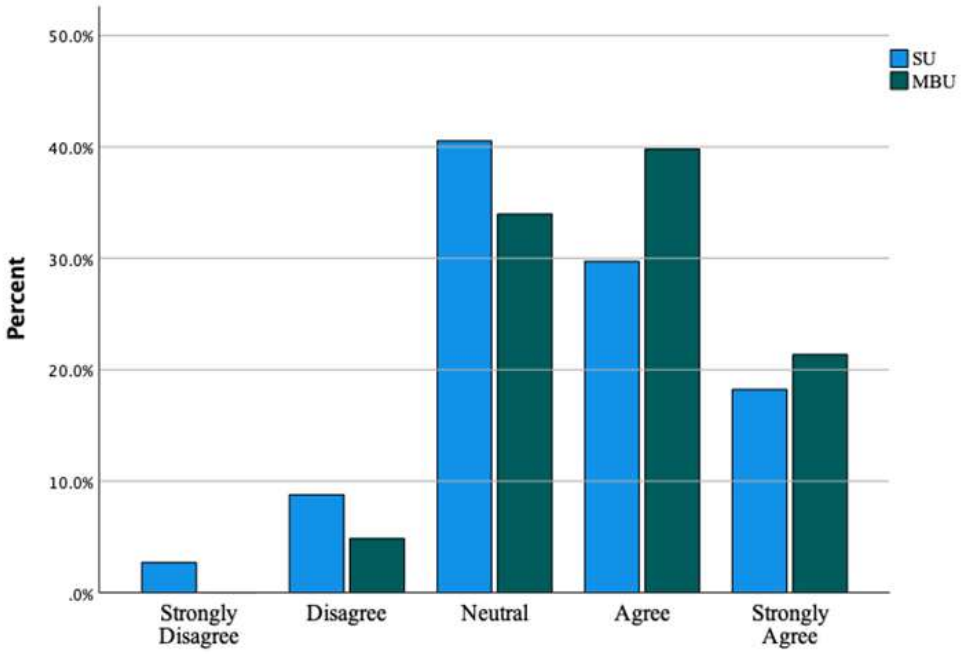
4.4 Students' views towards "cultural change" at their university

The digital transformation process was a painful process as is every kind of change. The obstacles to success can be a deep attachment to the old systems, inflexibility of institutions, a culture of risk avoidance, lack of skills, not having cooperation among information technologies

units and so forth (Harvard Business Review, 2017). Digital transformation in this extent affects all the levels of institution and requires a change in the cultural mindset.

In this context, the first statement posited "The learning culture at the university has not changed due to digitalization". 39.9% of SU students believed that learning culture has not changed while 32% MBU students believed it had while 38.5% of SU students and 37.9% of MBU students had no opinion. From this result, it can be said that a great number of the university students have no awareness of this area.

Graph 4 shows the results of the statement "My University strives to constantly learn and get better in how to transform digitally." regarding whether the students' universities are open to learning about digital transformation. When we look at the results, it is seen that the proportion of students who have no idea about the subject and the proportion of those who participated in the expression were high in both universities. A total of 47% of SU students; 61.2% of MBU students thought their university were constantly updating their digital transformation process.



Graph 4 My University strives to constantly learn and get better in how to transform digitally. Source: own elaboration

Digital transformation in an institution requires continuous updating, keeping up with new developments and adapting the institution to these developments. In this context, the statement "In my university, the openness to new ideas in teaching is prevailing" was directed to the students in order to measure the students' perceptions of their universities about new ideas. The

proportion of students at both universities who participated in this statement is considerable. 59.5% of SU students and 55.3% of MBU students said they agreed with this statement.

Digital transformation within the institution requires all stakeholders to be involved in the transformation process. One of the most important members of these stakeholders is the academic and administrative staff working within the institution. Keeping up with the digital developments within the institution of academic and administrative staff is important for the success of the transformation process. In this context, students' opinions were first asked "The academic staff can easily figure out new technologies and applications" in order to get their views on the level of understanding of new technologies and applications of academic staff at their universities. 58.1% of SU students and 48.5% of MBU students said academic staff could easily understand new technologies and applications. Students' opinions were then posited "The administrative staff can easily figure out new technologies and applications" in order to gain their level of understanding of new technologies and practices of administrative staff at their universities. 41.9% of SU students and 58.2% of MBU students said that administrative staff could easily understand new technologies and applications. When we look at the results obtained from both university students, we can conclude MBU administrative staff is better than SU in understanding new technologies and practices.

Finally, the phrase "I think that staff should receive special training on digital education" was directed towards university students about whether the staff needed special training in digital education. Looking at the results, it is seen that both university students stated that the staff should receive more of this. 56.1% of SU students and 66% of MBU students agreed with this statement.

4.5 Students' views towards "resources of the university"

With digital transformation, HEIs need to offer students the necessary resources (time, finance and effort) from the beginning of their university education till graduation (Ölmez, 2019). In this context, the fundamental difficulties that HEIs face during the digital transformation process are with infrastructure as students and academicians have insufficient equipment and internet access, lack sufficient knowledge of distance education and technologically-aided teaching methodology (https://ittes.org.tr/?s=15&dil=en). In order to determine the students' views of these problems, some statements were directed to this area. Within this scope, the statement "I am satisfied with my university's measures to the pandemic, was posed with 50.6% of SU students and 73.8% of MBU students in agreement. The statement "My university had enough resources (time, money, IT staff) at the beginning of the pandemic

for establishing digital learning" was posed with the aim of evaluating the resources of the universities related to digital education from the beginning of pandemic. 44.2% of SU and 68% of MBU students expressed their agreement with this statement. To determine whether the university supports their staff for improving their digital skills, the statement "My University provides support in order to advance digital skills of the staff" was posited with 43.9% of SU students and 52.4% of MBU students having no opinion. As understood from these results, it is seen that both university students' awareness of this area is quite low.

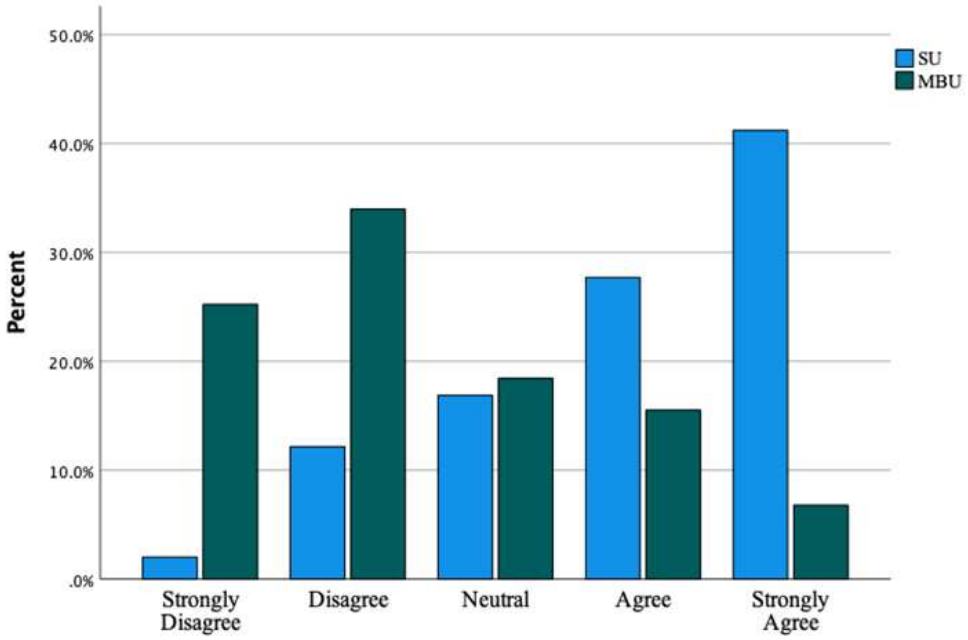
It is not wrong to say the digital transformation process in HEIs has been accelerated with COVID-19 quarantines forced new adoptions to the use of digital technologies for facilitating teaching and the learning process (Gordon, 2021). With this process, HEIs needed to upgrade insufficient technical infrastructure. To obtain the students' views on this area, the statement "During the pandemic, important technical infrastructures have been carried out for digital learning" was posed. 45.2% of SU students and 68.9% of MBU students expressed that their universities had made steps towards the use their crucial technical infrastructure.

The statement "I am satisfied with my university's support creating electronic teaching materials during the pandemic" was posited to evaluate their satisfaction about their universities' electronic teaching materials with 39.1% of SU students and 63.1% of MBU students agreeing with this statement. As such, MBU students have a higher level of satisfaction in this area.

4.6 "Digital skills" of the student

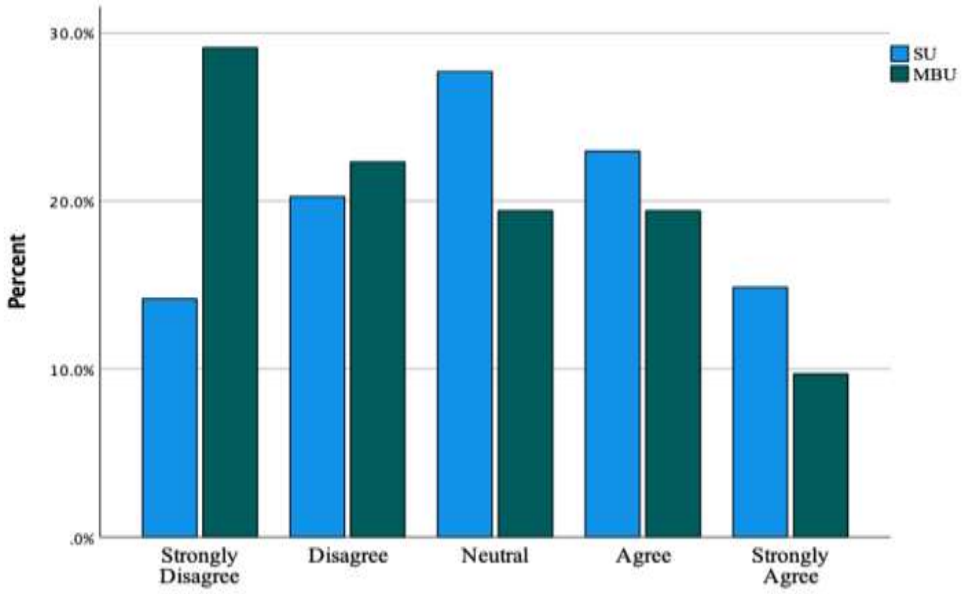
With the digitalization of activities in higher education, skills to be acquired have also changed giving HEIs a greater role in this process (Atas and Gunduz, 2020). The analysis of students' digital skills and being the most important stakeholder in the digital transformation process gives universities more credence in this area.

In this dimension, the students' were firstly posited with "I can easily figure out new technologies and applications". 68.9% of SU students agreed with this statement while 59.2% of MBU students disagreed. From the results, it can be understood that SU students are more successful at understanding new technologies than MBU students.



Graph 5 I can easily figure out new technologies and applications
Source: own elaboration

A follow up statement "I need technical support while using the digital tool" was posited with mixed results. As seen in Graph 6, 34.5% of SU students do not need any technical support while 37.9% stated they did. Compared to MBU students, 51.4% of them stated that they do not need technical support whereas 29.1% of them stated they did.



Graph 6 I need technical support while using the digital tool
Source: own elaboration

Students need training as not all of them have the necessary digital competency considering they are the most important stakeholder of the digital transformation process (Moreno, Colon

and Pozo; 2021 derived from Perez, Castro and Fandos 2016). This training could contribute to student's improvement in their digital skills and in reaching digital learning materials (Tejedor, Cervi, Perez-Escoda & Jumbo, 2020: 48).

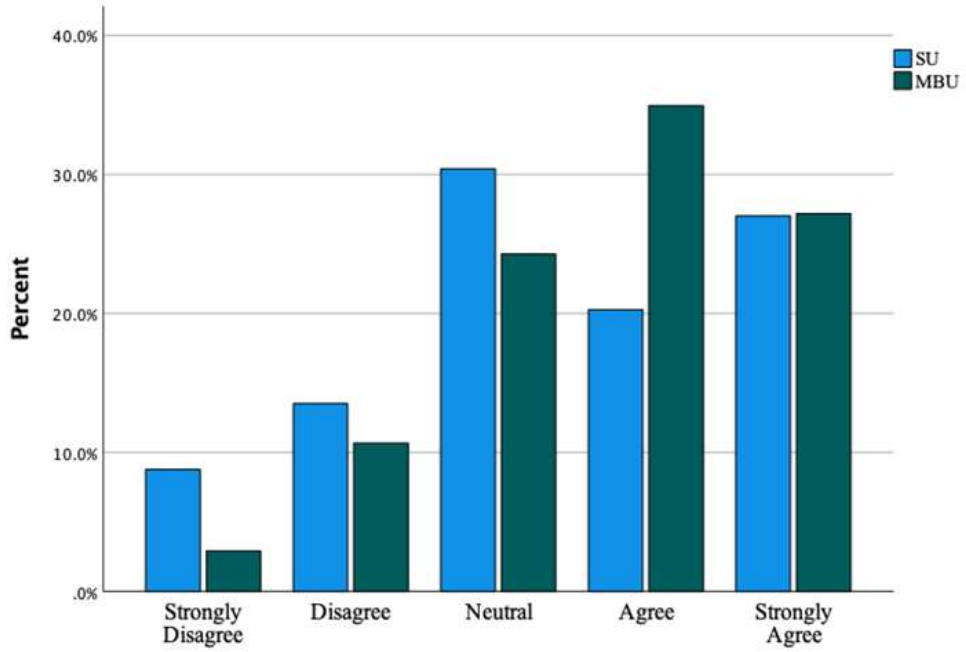
Within this framework, for evaluating the students' adaption to new technologies, the statement "I need practical training while adapting new technology" was posited. 58.8% of SU students and 71.9% of MBU students expressed agreement. As such, both university students feel a need for training while adapting to new technologies. Though students stated a need for training they also stated that they had sufficient equipment for following online courses. 60.5% of SU students and 71.9% of MBU students agreed with the statement: "I am sufficiently equipped to follow the online courses"

Although the digital transformation process has been effective in the last decade, especially within the context of COVID-19, the need for digital technologies has increased and with it the need for digital competency. Within this framework, 61.5% of SU students and 78.6% of MBU students agreed with the statement "The pandemic could positively affect my digital skills".

When determining the main difficulties that the students experience in online education, 60.8% of SU students stated internet problems, 46.6% university technical infrastructure, 58.6% learning difficulty. With MBU students, 42.7% stated internet problems and 39.8% with learning difficulties. The results indicate that the main difficulty for students in the digital transformation process are problems with the internet.

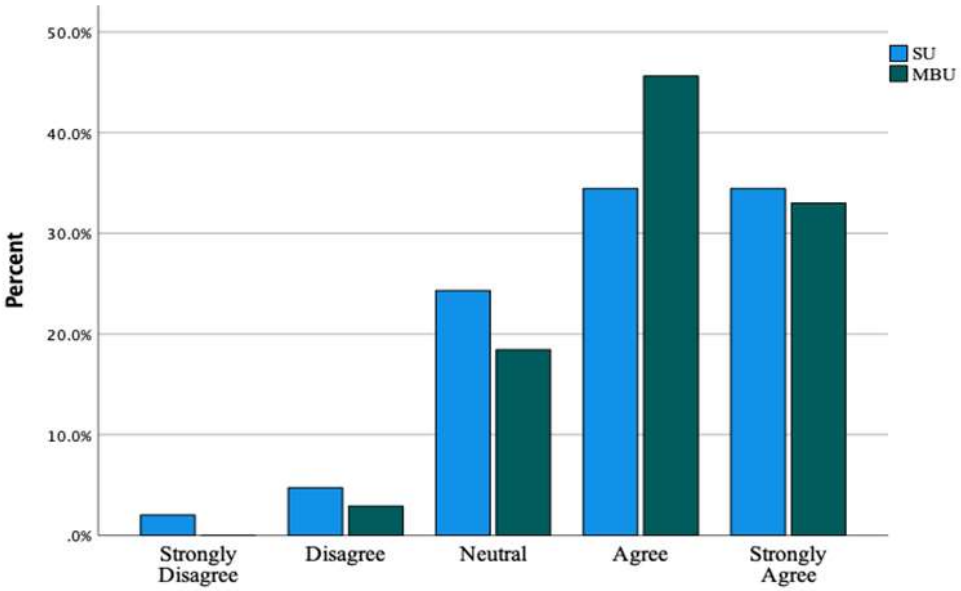
4.7 Future Development

For a better understanding of the effect of digital education on quality, the statement "Digital learning will increase the quality of education compared to past" was posited and can be seen in Graph 7. As understood from the graph, only a few students believed that digital teaching does not increase education quality.



Graph 7 Digital learning will increase the quality of education compared to past
Source: own elaboration

The views on the statement asked related to universities future digital development are given in Graph 8. Most of SU and MBU students stated that their universities will keep up with digital development. As understood from these results, students believe their universities are keeping up with the modern age.



Graph 8 I think my university will keep up with digital development in the next 5 years
Source: own elaboration

Conclusion

HEIs have been affected by digital technologies more than ever before in the teaching and learning process. For both keeping up with the modern age and being effective in the

international field, benefits from digitalization has become a must for HEIs. The most important stakeholders in this process are students and their perception of universities' digital transformation and their own digital skills carries great importance in terms of a success. Within this scope, this questionnaire, applied to 251 students studying from SU and MBU aimed to evaluate the students' views towards digital transformation. The data obtained between January and March 2022 dealt with 7 social/technical dimensions. According to the research results, relative meaningful data was collected about the students' perception of their university digital process.

When the results were examined, quite a vast number of MBU students expressed positive views on their university digital strategy compared to SU students who were more indecisive about this process. Although students stated that digital education enables them to use their time flexibly, it negatively affected their concentration and therefore, this does not have a desired effect on their success. The Internet problem was described as the main difficulty for the students in digital transformation process, yet MBU students felt more satisfied about their university' services and technical infrastructure during pandemic process compared to SU students. According to the students' views, SU academic and administrative staff has less understanding of new technologies and applications than MBU academic and administrative staff. Both university students stated that their personnel need to receive training about digital education. A great majority of the students believe that their universities will keep up with digital developments over the next 5 years as well as its implementation.

To sum up, digitalization is not a process that begins, continues and is completed in a particular time. On the contrary, it requires continuously following developments and adapting them from the top to the bottom of the institutions. Therefore, it not only requires time but also makes it obligatory that all the stakeholders (students, academic- administrative personnel) should be involved. The research results indicate that students believe both university academic and administrative staff and students need to receive training in digitalization process. For this reason, their awareness of this subject should increase. While HEIs adapt to new technologies, there is a need for more focus on the necessary training for the involved stakeholders with regard to the digitalization process and awareness. Only in this way, digital technologies can increase the quality of higher education.

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