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Digital competencies and digital transformation in light of the corona pandemic: Obstacles and challenges at Northern Border University

الكفايات الرقمية والتحول الرقمي في ظل جائحة كورونا: المعوقات والتحديات في جامعة الحدود الشمالية

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Abstract

This study aimed to determine the level of digital competencies among faculty members and students at the Northern Border University and to identify the obstacles and challenges imposed by the Corona pandemic. A mixture of survey and qualitative approaches was adopted. The study sample consisted of (86) faculty members and (406) students. The study's questionnaire is to measure digital efficiency at the Northern Border University consisting of seven dimensions of (57) paragraphs, in addition to two open questions about the obstacles and challenges of digital transformation. The results showed that the skills possessed by faculty members and students were of a high degree, and also showed a lack of statistically significant differences in the average digital competencies of university students, whereas there are statistically significant differences due to the impact of the achievement level in favor of the achievement level "excellent" versus "good". The obstacles to digital transformation were concentrated in four main axes: infrastructure, the lack of interest in digital transformation, resistance to change, and the lack of appropriate competencies for digital transformation. The challenges facing digital transformation were summarized in four main axes: providing infrastructure, developing the quality of communication between the educational process participants, controlling the quality of educational outputs, and raising the digital efficiency of the educational process.

Keywords: digital competencies, digital transformation, Obstacles to digital transformation, Northern Border University.

الملخص

هدفت الدراسة الحالية إلى تحديد مستوى الكفايات الرقمية التي يمتلكها أعضاء هيئة التدريس والطلاب في جامعة الحدود الشمالية، وتكونت عينة الدراسة من (86) عضو هيئة تدريس و(406) طالب وطالبة مع تصميم استبانة إلكترونية لقياس الكفاءة الرقمية في جامعة الحدود الشمالية تكونت من سبعة أبعاد بواقع (57) فقرة، بالإضافة إلى سؤالين مفتوحين حول معوقات وتحديات التحول الرقمي في جامعة الحدود الشمالية، وأظهرت النتائج أن المهارات التي يمتلكها أعضاء هيئة التدريس والطلبة جاءت بدرجة مرتفعة، أما معوقات التحول الرقمي فقد تركزت ضمن أربعة محاور رئيسية: الأول يتعلق بضعف البنية التحتية ومحدودية توافر التجهيزات الخاصة بالتحول الرقمي، والثاني يتعلق بعدم الاهتمام بالتحول الرقمي، والثالث يتعلق بمقاومة التغيير وعدم تقبل التقنيات الجديدة التي يحتاجها التحول الرقمي، والرابع يتعلق بعدم وجود الكفاءات المناسبة للتحول الرقمي.

الكلمات المفتاحية: الكفايات الرقمية؛ التحول الرقمي؛ معوقات التحول الرقمي؛ جامعة الحدود الشمالية.

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Introduction

Coronavirus has drastically impacted the educational field around the world, and it has negatively affected students, teachers, and employees of educational institutions, so it has been necessary to protect teaching staff and students, by making them more flexible during this pandemic; and new preparatory tasks have emerged for the expected educational models in the future so communities urgently need flexible and resilient educational systems because we face an unpredictable future (British Columbia Teachers' Federation, 2021)).

Statement of the problem

Because of the sudden digital transformation in educational institutions around the world, new challenges in the context of educational designs forced them to redesign their educational and learning processes, so they had to rethink many of their old assumptions about the learning process, and this is a challenge that cannot be delayed in educational institutions in the Kingdom of Saudi Arabia and the foregoing calls for acquiring the digital competencies required to deal with this new situation through scientific research and study.

Study Questions:

Based on the above, this study addresses the following questions:

- What digital competencies do Northern Border University faculty have?
- What digital competencies do Northern Border University students have?
- Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the average digital competencies of faculty members at Northern Border University attributable to variables (gender, academic rank and years of experience)?
- Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the average digital competencies of Northern Border University students due to variables of (gender, academic year and achievement level)?
- What are the obstacles facing digital transformation in light of the Corona pandemic at Northern Border University?
- What are the challenges facing digital transformation in light of the Corona pandemic at Northern Border University?

Objectives of the study:

The current study aims to describe the characteristics of the competencies that characterize faculty members, and those that students develop during their academic lives, to identify the obstacles to digital transformation to determine the developmental preparations necessary for the post-Corona world and to describe effective strategies to continue development in pursuit of digital transformation in all its dimensions and requirements.

Significance of the Study:

The study attempted to contribute to the development of long-term strategies to benefit from the data of technologies and integrate them into education and university administration. The study will attempt to identify the training needs of students and faculty members with the aim of integrating techniques into the university education process and ensuring a better learning environment for students. All this will help those involved in the university with proper planning to keep up with the situation and deal with it.

Terminological Terms

Digital Competencies:

Defined as the confident, decisive, and responsible use and interaction of digital technologies to learn, work and participate in society. (European Commission, 2019). Procedurally, it is defined in this study as the degree to which the respondent obtains the digital competency assessment tool.

Digital transformation: transformation is defined as the most sophisticated process of thinking and structuring to solve problems in new and innovative ways by using existing technologies and available digital information, with the aim of reorganizing technology and business models, and arriving at fundamental changes in infrastructure and adapting existing processes (Oxford College of Marketing, 2018).

Limitations of the study

- Time limitations: The first semester of the academic year 2021-2022.
- Spatial Limitations: Northern Borders University; Saudi Arabia.
- Population Limitations: The researcher in this study targeted a sample of faculty members and undergraduate students at Northern Border University.

Conceptual Framework:

First: Digital Competencies:

In order to identify relevant competencies using modern ICTs, a variety of terms have been developed that sometimes go beyond the term digital competencies. Although discussed and defined in different ways, the term competencies represent a combination of knowledge and skills as well as motivational and voluntary aspects and they are necessary for active participation in society.

In an era of digital transformation, active participation includes learning about digital competencies; hence the emergence of digital competency frameworks. One of the most important is the EU Digital Competence Framework for Citizens (DigComp) (Carretero et al., 2017). Within this framework, digital competence includes the confident, decisive, and responsible use of digital technologies and interaction with them to learn, work and participate in society.

Second: Digitalization, digital representation, and digital transformation:

Digital Transformation refers to the most advanced process of thinking and structuring, by which problems can be solved in new and innovative ways using existing technologies and available digital information (Heuermann, Engel & Von Lucke, 2018).

Digital transformation aims at reorganizing technology and business models, arriving at fundamental changes in infrastructure, and adapting and accommodating existing processes in the best possible way through new thinking patterns (Oxford College of Marketing, 2018).

Third: Changes needed for digital transformation in higher education:

Digitalization and digital transformation gave rise to the need to make the necessary changes in the framework of the learning educational process according to the data of new digital technologies in order to be consistent with and adapt to the changes in new learning habits (Androsch et al., 2017), such as making changes in the design of learning arrangements for learning individuals, the ability to retrieve information at anytime and anywhere from mobile devices, search for interests, and generate knowledge, all of which refer to more individual learning settings.

According to Díaz-García et al., (2022)

Digitalizing means just a first step in the process, in which the institutions use new tools in order to carry out old activities. Further than just using technologies, digitally transforming an educational institution, or even the entire system, requires a redesign of the learning and teaching practices, reconsidering the roles of all the stakeholders involved in the educational process, promoting practices like flipped learning, gamifications or crossover learning; as well as the implementation of new managerial practices where ICTs reshape the main value activities of these organizations.

Fourth: Requirements of digital transformation in higher education:

The introduction of digitization necessitated many changes in learning behavior and in the skills required for transformation have emerged, and the need for a cohesive educational ecosystem in which learners move from the inside out smoothly has emerged. In this way, the focus should not only be on the labor market but also on preparing students for the social, occupational and special problems that they will face in the future through the development of science-based work competencies (Gerholz, 2018)

Fifth: Previous studies:

The study of Halim and Rizk (2021) emphasized the importance of digital transformation and e-learning in Saudi universities as an important and fundamental requirement through paying attention to the technological structure and working to modernize it.

The results of a study (Del Arco, Silva, & Flores, 2021) showed that the most prominent negative roles of students revolve around the lack of interaction, as well as disinterest in change. Although there are no great difficulties in pursuing the teaching process, there is limited interest in the emotional aspects of students.

Finally, the study (Pesha, & Kamarova, 2020) aimed to identify the facing distance education in Russian universities during the pandemic revealed a high level of respondents' dissatisfaction with the quality of educational services online (Pesha, & Kamarova, 2020). With regard to students' functional competencies, she explained that the forced transition to distance learning had contributed to the development of digital competencies, albeit to

some extent at the expense of the development of social and emotional competencies.

Methodological procedure

Study Methodology:

To achieve the objectives of the study, a mixed approach of descriptive survey method and the qualitative method was adopted in line with the nature and objectives of the study.

Study sample:

The main study sample consisted of (86) faculty members, (17.5%) of the total, of whom (27) were males and (59) were females, in addition to (406) of the Northern Border University students, (82.5%) of the total, of whom (148) were males and (258) were females. (Appendix 1)

Digital Proficiency Scale:

The researcher developed a questionnaire to measure digital efficiency, by reviewing the theoretical literature related to the subject and looking at previous studies in order to derive the dimensions and paragraphs of the scale, and to achieve validity the scale was presented to ten arbitrators from the faculty of the universities of North Border and Al-Jouf, and based on their observations, the scale consisted in its final form of (57) paragraphs, divided into seven dimensions using the five Likert scale.

The scale was applied to a pilot sample of (30) students and faculty members at Northern Border University outside the main sample, with the aim of extracting the Pearson correlation coefficient between the score of each of the scale’s items with the total score of the dimension to which it belongs and calculating the correlation of the items with the total score of the scale as a whole. (Appendix 2). All values of correlation coefficients were positive, high and statistically significant at the level of (0.05) to emphasize the internal consistency of the scale.

It then verifies the validity of the scale by applying it to the members of the pilot sample in order to calculate the validity using the Cronbach method to extract the alpha coefficient of validity, which reached (0.85). Then it was applied to the pilot sample again after ten, and then the correlation coefficients between the first and second applications were calculated with the aim of extracting the validity in the return method, which reached (0.82). As the values were high, it can be said that the scale is liable to use.

Results of the study and discussion

Results related to the first question:

To answer the first question, which states, “What digital competencies do Northern Border University faculty have? “The arithmetic means and standard deviations of the dimensions of the digital competency scale were extracted as shown in the following table:

Table 1.

Arithmetic means and standard deviations of the dimensions of numerical competencies possessed by faculty members at Northern Border University (n=86)

Questionnaire dimensions	The mean	standard deviation	Ranking
Parameter 1: The Basics of Digital Technology	4.36	0.71	1
The second parameter: the use of digital technology	4.22	0.81	3
Parameter 3: Access to Digital Content	4.28	0.82	2
Parameter 4: Digital Content Creation and Development	3.36	1.16	7
Parameter 5: Data Management and Digital Content Storage	3.68	1.06	5
Parameter 6: Data Sharing and Digital Content	3.88	1.03	4
Parameter 7: Security and Privacy	3.62	1.10	6
The tool in total	3.89	0.96	

Source: Author

The table indicate the arithmetic average of the tool as a whole is (3.89), that is a high degree of the skills possessed by faculty members. At the level of parameters, the first “the basics of digital technology “comes top with an arithmetic

average of (4.36) while the fourth parameter: the design of digital content received the bottom rank with an arithmetic average of (3.36).

At the level of paragraphs (Appendix 3), paragraph (17), which stipulates that “the Internet shall be used to search for information effectively”, received the highest mean of (4.62), while paragraph (31), which stipulates that “educational games shall be designed”, received the lowest mean of (2.82). So the digital competencies, skills and abilities developed by faculty members need continuous improvement and updating.

Table 2.

Arithmetic means and standard deviations of the parameters of numerical competencies possessed by students of the Northern Border University (n=406)

Questionnaire parameters	Adjusted arithmetic average	standard deviation	Ranking
Parameter 1: The Basics of Digital Technology	3.85	0.95	3
The second parameter: the use of digital technology	3.96	1.00	1
Parameter 3: Access to Digital Content	3.94	0.97	2
Parameter 4: Digital Content Creation and Development	3.38	1.11	7
Parameter 5: Data Management and Digital Content Storage	3.63	1.04	4
Parameter 6: Data Sharing and Digital Content	3.55	1.06	6
Parameter 7: Security and Privacy	3.61	1.05	5
The tool in total	3.68	1.03	28

Source: Author

The above table indicates the increase in the arithmetic average of the tool as a whole reached (3.68) for the skills of students, and at the level of dimensions, the second dimension “the use of digital technology” ranked first with an arithmetic average of (3.96) with a high degree, while the fourth dimension: the creation and creation of digital content ranked last with an arithmetic average of (3.38).

At the level of the paragraphs of the scale as a whole (Appendix 4), paragraph (11), which states “the ability to create and manage digital accounts (Facebook, Twitter... etc.)” received the highest arithmetic mean (4.30), while paragraph (34), which states “Design and development of digital learning activities”, received the lowest arithmetic mean (3.05) and thus ranked last at an average level.

Although the twenty-first century people have distinctive digital skills and competencies, this excellence in digital efficiency tends towards non-functional competencies in most cases, as the paragraph “Designing and developing digital

Results related to the second question:

To answer the second question which states, “What digital competencies do Northern Border University students have? “The arithmetic means and standard deviations of the dimensions of the digital competency scale were extracted as shown in the following table:

learning activities” has the lowest arithmetic average, and the paragraph “The ability to create and manage digital accounts (Facebook, Twitter.)” On the highest arithmetic average of all paragraphs.

This result is in line with the results of the study (Batez, 2021), which indicated that there are differences between the level estimated by university students for ICT skills and ICT skills used in online education, where students estimated their level of ICT skills as higher than It is essential for online education.

Discussing the results related to the third question:

To answer the third question, which states: “Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the average digital competencies of faculty members at the University of the Northern Borders attributed to variables (gender, academic rank and years of experience)?” Use the triple contrast analysis test as shown in the following table:

Table 3.

Analysis of the tripartite variance of the impact of gender, academic rank and years of experience at the level of digital competencies of faculty members at Northern Border University (n=86)

Source of variance	SQUARES TOTAL	Degrees of freedom	Squares mean	F value	sig
Gender	3305.438	1	3305.438	2.069	.154
Academic Rank	12986.765	3	4328.922	2.851	.042
Years of Experience	4988.229	2	2494.114	1.562	.216
Error	100860.562	67	1505.382		
Total	4396380	86			

Source: Author

The table shows the statistically significant differences at the level ($\alpha \leq 0.05$) in the average digital competencies of faculty members due to the effect of academic rank, where the value of P is (2.851) with statistical significance. (.042) It is also clear from the above table that there are no statistically significant differences at the level of ($\alpha \leq 0.05$) in the average numerical competencies of faculty members attributed to gender variables and years of experience, where the statistical significance reached).154 (f) and (216) respectively. To determine the direction of differences in the averages of the academic rank variable, the Scheffe test was used for dimensional comparisons, showing that the highest differences between the means were statistically significant between the two categories (lecturer and assistant professor) with a difference between the means that reached (27.546) in favor of the rank of assistant professor, and there were no significant

differences Statistical significance among the rest of the variable categories. This result can be justified by the fact that all faculty members have positive attitudes towards digital competencies. This result is a clear indication of their sincere interest in trying to succeed in the goals of the educational process. Zawacki-Richter study (2020) pointed to the positive impact on digital innovations in university teaching, and the great commitment of many faculty members due to the pressures generated by the crisis.

Results related to the fourth question:

To answer the fourth question which states: “Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the average numerical competencies of Northern Border University students due to variables (gender, academic year and achievement level)?” Use the triple contrast analysis test as shown in the following table:

Table 4.

Analysis of the tripartite variation of the impact of gender, academic year and achievement level at the level of digital competencies of students at the University of the Northern Borders (n=406)

Source of variance	SQUARES TOTAL	Degrees of freedom	Squares mean	F value	sig
Gender	2768.672	1	2768.672	1.477	.225
Academic Year	11877.110	3	3959.037	2.128	.096
Achievement level	12,336.410	2	6168.205	3.325	.037
Error	747608.447	403	1855.108		
Total	19130376	406			

Source: Author

The above table shows that there are statistically significant differences at the level of ($\alpha \leq 0.05$) in the averages of the digital competencies of the students of Northern Border University attributed to the variable achievement level, and when

determining the direction of the differences in the averages of the variable achievement level using the Scheffe test for post comparisons, it was found that the differences between the level of achievement is “excellent” and the level of

“good” is in favor of students with an “excellent” achievement. It is also clear from the table that there are no statistically significant differences at the level of ($\alpha \leq 0.05$) in the average digital competencies of the students of Northern Border University attributable to the variables of gender and academic year, where the statistical significance reached (225) and (096) respectively, which is below the level (05) was therefore statistically not a function of the relative affinity in the numerical competencies they possessed with different gender and academic year variables.

The reality of the situation and the circumstances determined by the pandemic period increased the digital competencies that students possessed in general, and most of them adapted to the new conditions somewhat quickly, as they are born and grow in the technology era, and this was confirmed by the study (Pesha, & Kamarova, 2020), whose results showed that the forced transition to a situation Distance learning has contributed to the development of digital competencies for university students, but at the same time it has somewhat reduced their chances of developing social and emotional competencies.

Results related to the fifth question:

To answer the question: “What are the obstacles facing digital transformation in light of the Corona pandemic at Northern Border University?” “The responses of the study sample to the obstacles facing digital transformation at Northern Border University were monitored and analyzed through the open question that formed the first axis of the third part of the questionnaire: “In your opinion, what are the obstacles facing digital transformation at Northern Border University?” In general, the analysis of the responses of the sample of the study on the obstacles resulted in four main axes as follows:

First: Constraints related to poor infrastructure and limited availability of equipment for digital transformation:

Adequacy of infrastructure, including hardware supplies and technical resources, support for Internet networks, and increasing the efficiency of educational platforms, are among the most important factors to ensure the success of the transformation process. When monitoring the responses of the study sample, some responses that stopped at infrastructure constraints emerged in several forms. There are administrative obstacles related to the lack of readiness

mentioned by some, and there are logistical obstacles related to the lack of technical devices and lack of maintenance in addition to the lack of devices among students. There are constraints related to the lack of financial support provided by the university for digital transformation, which were pointed out by a not insignificant number of respondents. Similarly, faculty responses were very similar to those of students, who also pointed to a lack of faculty and student skills. Reflecting on these views, which were emphasized within this axis, faculty and students confirm the existence of the digital transformation infrastructure at Northern Border University, but at the same time they consider it insufficient. From here, Northern Border University must work and plan to mitigate this impediment, through increasing the financial budget for digital transformation, and entering into partnerships with the private sector to ensure access to information and communications technology to raise its quality.

Second: Restrictions related to the lack of interest in digital transformation:

This is the most important thing at which this result stopped, as this handicap came at a high level, as it exceeded 20 times in the study sample of students and faculty members, which rings the alarm bell for the management of the University of the Northern Border to move in to address this obstacle and find practical solutions to get rid of it and mitigate its dangers. This problematic result clarifies and critically discusses the role that the university must play, and the reforms that must be pursued. The study sample mentioned the lack of interest of the administration in digital transformation and its slow response to new developments, in addition to the lack of training courses or workshops. The responses of faculty members were largely consistent with the responses of students, as they indicated a lack of awareness of the digital development of university employees, which negatively affected the services provided by the university. It is as if we are here, within these responses, witnessing a psychological element behind an important obstacle facing digital transformation at Northern Border University, which is summed up in the lack of attention that leaves behind neglect and disregard for the importance of digital transformation and its effective roles in moving towards the future.

Third: Obstacles related to resisting change and not accepting the new technologies needed for digital transformation:

The lack of acceptance of what is new and resistance to change is one of the main reasons for the failure of most development strategies. Resistance to change may take many forms, such as the public or confidential rejection of changes announced by the university administration, and may be expressed through cold, shy, or aggressive responses. Some pointed out the difficulty of changing the mindsets of many employees from what they are accustomed to and their routine adoption and the university's unwillingness to change and about the availability of the real will of the university towards transformation. The responses of faculty members have largely agreed with the responses of students, in terms of not wanting digital transformation charges, adhering to traditional methods and being content with their experiences, and then another suggests activating awareness of the importance of digital transformation, complaining about the lack of training programs for faculty members. Hence, the development of an effective strategy to confront and address the obstacles related to resistance to change must be part of the organizational change plan for the future management of the Northern Border University, because dealing with this matter is not limited to knowledge of the possible reasons for resistance to change, but goes beyond knowledge of the life cycle of resistance to change, and the sensitive stages in the process of real digital transformation that requires a real will.

Fourth: Constraints related to the lack of appropriate competencies for digital transformation:

Human resources are the most important elements that work to develop the organizational work of any educational institution. With efficiency and training, the process of change goes on the right path. Digital transformation as one of the contemporary components and features of the Northern Border University needs competencies that can be managed. Therefore, the lack of these competencies hinders the process of digital transformation. A group of the study sample indicated the lack of competencies and devices in addition to the inability to attract the appropriate competencies. Another added the lack of proficiency of employees in using technology in the educational process and the weakness of their talent. The responses of faculty members were consistent with the responses of students in terms of the lack of specialists in addition to the lack of courses, competencies and infrastructure, as if the tongue of the situation for students and faculty members says: Attracting

the appropriate competencies ensures the injection of new blood within the university, which helps accelerate the process of digital transformation, by adding new skills and experiences that help to develop and increase the productivity of university work and professional growth within the University of the Northern Borders.

Results related to the sixth question:

To answer the question: "What are the obstacles facing digital transformation in light of the Corona pandemic at Northern Border University?" The study sample's responses to the challenges were analyzed through the open question that formed the second axis of the third part of the questionnaire, which states: "In your view, what are the challenges facing digital transformation at Northern Border University?" In general, the analysis of the responses of the study sample resulted in many proposals that we present as follows:

First: Challenges related to providing infrastructure and raising the level of the technical aspect:

Digital transformation encourages students and faculty members to work in a new format, which requires changes in management functions in relation to the implementation of procedures, by raising the level of the technical aspect and working to provide the infrastructure that corresponds to the requirements of digital transformation. The sample of students indicated some challenges related to raising the level of the technical aspect, such as working to raise the strength of the Internet in the branches of the university and neighboring villages and providing a dynamic educational platform through a strong infrastructure and massive storage of information. The sample of faculty members indicated almost the same points. Some responses to these challenges came from the weakness of the network in the villages and the difficulty of all students and members having devices, which contradicted the digital transformation.

Second: Challenges related to developing the quality of communication between participants in the educational process:

The need to develop communication mechanisms between teachers and students that include real educational outcomes referred to by some members of the study sample, such as the need to use contemporary methods of education and the

establishment of an infrastructure of information that facilitates communication between employees and service seekers, as well as providing the necessary capabilities for students and providing adequate support to them, knowing that a large percentage of respondents confirmed that they have the necessary resources for online learning, but they suffer from effective communication with the other party, hence the challenge related to digital communication to represent the bridge of physical distance between the parties to the educational process.

Third: Challenges related to controlling the quality of educational outputs:

Digital transformation has an impact on educational activities, whether through complex technical knowledge or through the potentially changing behavior of learners. In the first stage of digitizing the educational process, the need for the physical presence of those with access to the Internet disappears in many cases, which requires controlling the quality of educational outputs. A large percentage of the sample of students and teachers focused on the quality control point, without explaining how to control the quality of digital transformation. This is a major challenge for the university administration in finding and evaluating digital transformation, and finding clear standards to ensure the quality of educational outputs. Perhaps the most prominent of these challenges came at the level of proper planning for transformation. In general, the rapid digital transformation process may be alarming for many participants in the educational process, as the achievement of digital transformation must not be at the expense of scientific outputs.

Fourth: Challenges related to raising the digital efficiency of the educational process parties:

A Knowledge about how to start digital transformation is still not specific and there are not enough practical examples and experiences to help universities in general to take concrete steps, and perhaps the most prominent reason for this challenge is the general weakness in the digital efficiency of the parties to the educational process within universities, and more privately a large percentage of student responses came to take place in the astronomy of raising the absorptive capacity of students and raising the technical competence of students and faculty members together, B Specialized training programs, and finding new disciplines that correspond to the professions of the future and are important in the labor markets, As for the

responses of faculty members, they came to work to empower students with sufficient skills to deal with devices and train university staff to use smart applications and electronic services efficiently and develop technical staff and activate their roles and increase the organizational culture of university employees, ensuring a distinguished level of digital dealings in all university facilities and the use of flexible operational models

Conclusion

The educational systems around the world have undergone fundamental changes that have upset their settings due to the Corona pandemic, which forced radical changes to the Northern Border University systems in particular, in light of the lack of prior and real experience of students and faculty members, the Northern Border University was not ready for this reality, as everyone was shocked by the lack of digital and electronic requirements necessary for the sudden digital transformation to distance education. Hence, the results of the current study confirm the need for further development in the teaching and learning process supported by technology within the university, and this is a challenge that must be met sooner rather than later within all higher education institutions in the Kingdom of Saudi Arabia.

The study revealed several shortcomings in digital transformation strategies. Hence, the study concluded that organizational leaders, human resource development specialists, and Northern Border University staff must work to help the university not only recover from the crisis, but also thrive in a new era within frameworks transformed by technology.

Finally, the results of the current study emphasized the importance of digital competencies determining the level of digital competence, which indicated that the skills possessed by faculty members and students came to a high degree, which provides fertile soil when dealing with the process of digital transformation at the university, but with great caution.

Recommendations:

- Creating advanced training programs and workshops that serve digital transformation and raise the digital competencies of students and faculty together.
- Seeking to overcome the negative effects that the pandemic has created on the

university and on all levels of the educational system.

- Working to create real partnerships with local community organizations in the public and private sectors to ensure effective digital transformation.

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