

STRATEGIES FOR DIGITAL TRANSFORMATION OF UNIVERSITIES

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Abstract: This research aims to understand digital transformation processes and their implications for universities comprehensively. It explores the impact of digitalization on higher education, focusing on the current state of universities, their existing processes, and the steps necessary for effective digital transformation. The study presents a strategic roadmap for integrating and managing these transformative changes within institutional strategies by examining how digital transformation influences the vision of universities. This study reviews the literature to examine the impact of digital transformation strategies on higher education, particularly the integration of artificial intelligence (AI) in this field. The analysis shows that universities' role in society and the economy has evolved and is expected to undergo significant changes in the coming decade. Universities must adopt emerging business models to stand out in a competitive higher education landscape. These institutions need to adapt quickly to technological advancements to ensure their sustainability. The Covid-19 pandemic has dramatically accelerated the global adoption of technology. The main drivers of digital transformation in universities can be increased competitiveness, enhanced user experience, greater agility, and significantly reduced operational costs. A key priority should be exploring innovative approaches to establishing technology development centers through research to address the growing skills gap. Universities must support academics in advancing digital skills and developing creative teaching methods, promote digital literacy throughout academia, and encourage the adoption of digital learning platforms. Establishing clear policies to embrace the digital era in higher education is crucial. As universities compete globally for students, faculty, and funding, adopting and integrating new technologies is vital.

Key words: Artificial intelligence, digital transformation, higher education, university 4.0, multimode universities.

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1 Introduction

The transformation process associated with the transition to Industry 4.0 is increasingly important for higher education institutions, which must adapt to these changes. The digitization of industries is reshaping the business environment, impacting higher education and the development of related skills. As a result, universities are evolving into technological hubs that focus on cultivating and delivering skills for the future. The adoption of Industry 4.0, along with its shifting duties and responsibilities, necessitates that higher education institutions embrace digital transformation. These institutions must implement proactive strategies to succeed in an era of growing uncertainty and intense competition (Telukdarie & Munsamy, 2019). Consequently, digital transformation is a widely discussed topic in academia. (Calvet et al., 2019; Gonzalez-Sanmamed et al., 2020; Guri-Rosenblit, 2019; Leal Filho et al., 2024; Mexhuani, 2025; Rego et al., 2024; Saini et al., 2025; Suárez-Guerrero et al., 2023).

The technological advancements of Industry 4.0 have compelled higher education institutions to undergo a digital transformation across all aspects. While many universities have developed strategies for digitalization to adopt new technologies, most struggle with practical implementation. These institutions must have a comprehensive vision for digital transformation (Benavides et al., 2020). Higher education institutions must recognize the importance of swiftly adapting to digital changes and taking decisive action (Deshpande, 2018). Key steps for adjusting to digital transformation in the education sector include aligning all digital initiatives with the universities' overall visions and strategies and investing in communities that foster ambitious and talented digital innovators. (PwC, 2018).

In today's uncertain climate, higher education institutions must enhance their academic output, effectively integrate technology into their education programs, and actively engage stakeholders (McKinsey, 2018). To address these challenges, universities must first understand how to meet their stakeholders' expectations. Mapping the demands of key stakeholders is essential for advancing higher education institutions. Furthermore, universities should analyze the challenges and opportunities that could impact the future of the education sector. Significant changes in the education system, driven by a globalizing economy, are rapidly altering the quality of higher education. A deep understanding of global education is vital for universities aiming to improve their educational and training offerings. To achieve a sustainable position, universities must be prepared to adapt to

the practical changes brought about by the macro environment and incorporate digital transformation strategies into their programs. (Mohamed, Tlemsani, & Matthews, 2021).

Current strategies for developing universities focus on strengthening their competitiveness on a global scale (Akhmetshin et al., 2021). Universities must have an infrastructure suitable for digital innovations to adapt to global challenges (Barabanova et al., 2019). Today, many universities are unwilling to switch to the University 4.0 model. This study revealed the steps to be taken towards digital transformation in higher education and made suggestions for universities. The paper also provides an idea of how universities can turn effective changes that affect their vision to their advantage and create a roadmap to integrate them into their strategies.

This study explores the steps universities must take to achieve digitalization and secure a sustainable competitive advantage in today's highly competitive environment. The research aims to comprehensively understand digital transformation strategies and their implications for higher education institutions. It seeks to answer the research question, "How does digitalization transform the current processes and strategies of universities, and what key elements must be emphasized to gain a competitive advantage?"

Examining the digital transformation that affects universities' future success aims to provide a roadmap for integrating digital transformation into their strategies and implementing them. For this purpose, a literature review was adopted in the study. The literature review effectively presents current information, determines the relevant research needs, makes inferences, and makes suggestions (Cronin, Ryan, & Coughlan 2008).

2 Digitalization

Digitalization refers to using digital technologies to innovate and enhance processes, tasks, products, and services (Tomte et al., 2019). It has significantly changed the landscape of education and educational technology and plays a crucial role in transforming universities around the globe. Modern digital technologies offer new tools for the development of universities. The digitization of universities began over 30 years ago and has rapidly accelerated in the past decade. Key aspects of "information courses" include digitalizing the educational process and creating

and implementing massive open online courses, along with new university resources. (Doroshenko, Kalpinskaya, & Makarova, 2021).

The transformation of universities consists of four stages in line with industrial revolutions. University 1.0 refers to the period when the first universities were established and are called “institutional universities” (Dewar, 2017; Kuznetsov & Engovatova, 2016). From the beginning of the 20th century, the “University 2.0” model began to develop (Solovyov, 2018). Massification of education with democratizing access to knowledge characterizes university 2.0. University 3.0 is a synergy of education, science, and innovation. University 3.0 allows for consideration of learning and knowledge production processes by directly feeding the design and improvement of knowledge interfaces (Boehm, 2022). University 4.0 is an innovation in the university education system in the digitalization process of university institutions (Dewar, 2017). Solovyov (2018) defined University 4.0 as the design of the universities for the future.

Table 1 shows the characteristics of the university models (Boehm, 2022; Efimov & Lapteva, 2017; Giesenbauer & Müller-Christ, 2020; Gueye & Exposito, 2020; Titov, 2019).

It is argued that adopting a multidimensional organizational model such as the digital university, University 4.0, is suitable for achieving a sustainable competitive advantage (Gueye & Exposito, 2020).

The COVID-19 pandemic has greatly accelerated the adoption of technology around the globe. These advancements are transforming the nature of jobs and the skills needed to perform them. In our fast-paced, skills-oriented world, digitizing higher education has become more essential than ever.

University Models	Characteristics
University 1.0 <i>Limited to a few privileged people</i>	Ordinary universities implement only educational activities.
	Stochastic universities encourage intellectual discourse, auditoriums and libraries.
University 2.0 <i>Massification with easier access to education</i>	Research universities implement educational and scientific programs.
	Modern times universities develop experimental knowledge, construct scientific models, conduct empirical research, design machines and technology for efficient production.
University 3.0 <i>Use of technologies as teaching and learning tools</i>	Entrepreneurial universities aim to set an ecosystem for innovations.
	Universities for a variety of institutional forms (research, entrepreneurial, service, social, educational) implement a package of activities.
	- Culture of communication (channels to all stakeholders)
	- Interdisciplinary study fields
	- Innovation management
	- Redesign of activities
	- Project offices
University 4.0 <i>Integration of advanced technologies for all university activities</i>	- Incubator centers and technoparks
	- Exhibition and connection platforms
	Innovative universities have the resources and capabilities to solve particular problems that have not yet implemented in industries.
	Cognitive age universities (digital hubs) produce new knowledge by collective and hybrid human-machine intelligence and virtual reality.
	- Development of technologies and transforming knowledge into reality
	- Launching startups
	- Deployment of communication networks
	- Coordination of actions of all actors.

Source: Authors' work

Table 1: Evolutions of University Models

3 Digitalization Process

Global initiatives support the digitalization process. “Industry, innovation and infrastructure,” included in the Sustainable Development Goals announced by the United Nations, emphasizes the importance of digitalization in the future. The Educause report (2020) draws attention to the importance of digital transformation by pointing out the importance of the rapid use of educational technologies in education and training. It is essential for higher education institutions, which are trying to adapt themselves to the digital transformation process, to keep up with the digital transformation and gain a competitive advantage in the global sense. The digitalization process consists of automation, digitalization, digital transformation, and digital readiness (Shkliaruk, 2019). The automation phase re-

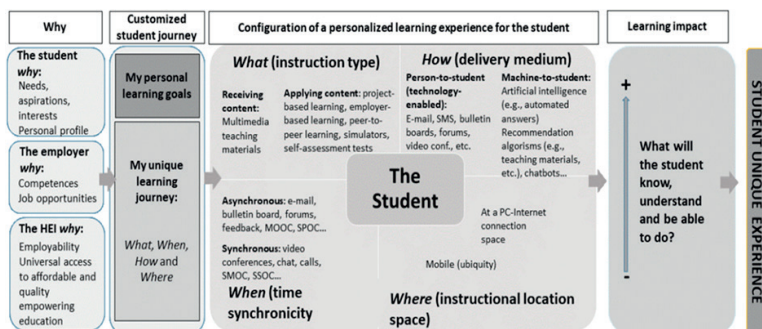
fers to implementing IT solutions. Applying IT in the digitization phase improves existing processes. In the digitalization process, new business models emerge, and transaction costs are reduced. In the digital readiness process, the internal stakeholders of an organization experiencing technological or digital transformation are ready for digital processes and operations at the corporate and personal levels. Digitalization has positive and negative effects on students, educators, and universities (Table 2).

Units	Positive Effects	Negative Effects
Students	First-hand experience on using digital mode.	Lack of needed digital infrastructure (internet, equipment, gadgets, convenient space)
	Flexible learning and individual scheduling.	Less experience for learning with peers.
	Saving time and transportation cost.	Being not familiar to digital tools.
	Developing digital learning skills - life long learning.	Developing new innovative ways for cheating.
Educators	First-hand experience on using digital mode.	Mental and other health risks caused by exposures.
	Convenient and flexible teaching.	Organizing teaching process independently.
	Saving time and transportation cost.	Lack of needed digital infrastructure (internet, equipment, gadgets, convenient space)
	Developing digital teaching skills.	Limits of digital technology.
Universities	Up-to-Date curricula.	Outdated infrastructure - technical and digital.
	Better preparation for teaching.	New inequalities.
	Flexible and fast operations in all educating related activities.	Long time for building digital transformation step by step.
	Overcoming resistance for digital mode.	New policies for data.
	Better data safety and data mining.	New rules for digitalization and ethics.
		Difficulties of implementation in skills development by hands-on activities.

Source: Authors' work

Table 2: Effects of Digitalization on Students, Educators, and Universities

In response to the digital transformation, Rof, Bikfalvi, and Marques (2022) designed a roadmap for a learning strategy that will change the learning journey of universities (Figure 1). The roadmap helps create customized student learning outcomes, matching students' needs and interests. The online multi-faceted learning journey aims to give the student a unique experience.



Source: Rof, A., Bikfalvi, A., & Marques, P. (2022). Pandemic-accelerated Digital Transformation of a Born Digital Higher Education Institution: Towards a Customized Multimode Learning Strategy. *Educational Technology & Society*, 25 (1), p.134.

Figure 1: A Roadmap for a Multimode University

The challenges and opportunities can be summarized as follows (Table 3).

Activity	Transformation	Challenges	Opportunities
Teaching	More online teaching	Reduced quantity and quality of public resources	Demand for new courses and programs (blended and online)
	Fewer international students	Time and resources limitations on preparing new teaching materials	Increased focus on local, regional and national problems in curricula
	More older students	Reducing teaching surplus	Increasing accessibility of knowledge (open science)
	Change in students learning preferences (in topics and format)		
	More unequal access to education		
Research	Topic investigated	Reduced quantity and quality of public resources	New and more research interest
	Networking	Diversion of funding towards topics with immediate value	Fast and open publication
	Research outlets and publications	Losing opportunities for close collaborations	New collaborations with all stakeholders
	Less funds available for research	Reduced internal research capability	Externalization of research activities
			Cost reduction in research (travelling, access to knowledge, subscriptions)
Industry Relations	Less resources available	Constrains enhancement for collaborations	Enhanced collaboration with particular industries
	looking beyond campus		Role of academia in supporting the recovery of economies
	Need innovative topics		Bridge the gap between curricula and industry needs
	More collaborations for rebuilding regions		Increasing relevance of academic activities to local and national communities
Employment, Management, Technology	Intensity to use of high-tech devices	Increased control and competition	Increased collaboration with all stakeholders
	New forms of employment	Deskilled workforce	A roadmap for transformation
	Intention to become a customer driven strategic business	Cross-cutting organizational change	Implementation of a more effective investment plan
Finance, Investment	Fewer international students and enrollments and less revenues	Potential of mergers among universities	Reduction in investment in fixed assets and operations
	Increased competition and concentration of universities	Less access to quality education for some	Adaptable and flexible budgeting
	Work and study anytime/anywhere	Offices and buildings are less important	Encourage academia-industry collaboration
	More support for "the jobs of the future".	Bias against some studies	
		Greater work related stress on employees	

Source: Adopted and modified from Márquez-Ramos, L. (2021). Does digitalization in higher education help to bridge the gap between academia and industry? An application to COVID-19. *Industry and Higher Education*, 35(6), p.633.

Table 3: Challenges and Opportunities for Universities Upon Transformation

4 Digital transformation

The literature defines digital transformation in various ways. While some authors have defined it as the application of information technologies to business processes (Heilig, Schwarze & Voß, 2017), others have considered it to focus on digital innovations and have a devastating impact on the business world (Skog, Wimelius & Sandberg, 2018).

Digital transformation, according to Norton, Shroff, and Edwards (2020), is changes in the way individuals work, powered by new digital technology and business models. It entails a balance of digital technologies, new skills, and human and organizational variables. Gregory et al. (2019) emphasized that digital transformation should also be balanced in terms of the relationships between corporate structure, corporate strategies, and technology to help respond to the needs imposed by the digital environment. According to Matt, Hess, and Benlian (2015), digital transformation strategies are innovation strategies as they focus on product and process transformation. In this context, digital transformation strategies include the interaction between the user and technology and allow the standard definition of products, services, and business models. Rodrigues (2017) stated that digital transformation is fundamentally about innovation and includes people, processes, and strategies.

Digital transformation affects every aspect of working, teaching, learning, and researching in higher education, leading to significant institutional changes (Kaputa, Loučanová, & Tejerina-Gaite, 2022). According to Fernández et al. (2023), digital transformation encourages innovation and provides various opportunities to make education systems more equitable, inclusive, engaging, cost-effective, and accessible. Additionally, this transformation is crucial for advancing the United Nations Sustainable Development Goals (SDGs) that are set to be achieved by 2030 (Trevisan et al., 2023).

Moreover, digital transformation goes beyond educational processes; it profoundly reshapes institutional operations. While enhancing students' learning experiences, it also streamlines administrative tasks and fosters innovation within academic environments. This shift requires adopting new skills and approaches through integrating digital technologies (Singun, 2025).

Digital transformation in higher education involves rethinking teaching and learning processes by integrating knowledge and technical skills while embracing digitality. The primary goal of this transformation in universities should be to

enhance student participation and success rates by improving their overall experiences. This objective encourages organizations to focus on gaining a competitive advantage through digital tools.

Another goal is to establish a data-driven decision-making framework for students, faculty, and staff by fostering a digital mindset across all university areas. Furthermore, a key aim is to reduce costs by optimizing resources.

International associations, projects, and governments support the digital transformation process in global education. For example, the European Union's Education Development Strategy of the United Nations 2020 focuses on integrating modern information technologies into the activities of EU educational institutions (Tomyuk, Diachkova & Novgorodtseva, 2022). Universities have significant responsibilities in the effective execution of the process for the improvement of the higher education system. In the rapidly developing information age of the 21st century, besides the production, access, and transfer of information to students, the role of universities in creating accessible, qualified information resources and raising quality workforce is becoming increasingly important (Hollands & Escueta, 2020).

For higher education institutions, digital transformation is necessary to compete and gain power in the global race. The use and integration of digital technologies enable universities to create a value chain (Kane, 2017). Today, digitalization changes the familiar understanding of education. Digital transformation is based on integrating technology that supports the development of new innovative learning opportunities. These technologies include learning management systems, mobile learning, interactive and fun content, virtual teaching assistants (chatbots), digital interactions (clickers), intelligent tutoring systems, virtual 3D live and interactive classes, and simultaneous translation (Gueye & Exposito, 2020).

In today's digital information age, information serves as both a trigger and an accelerator of digital transformation. To thrive in this dynamic environment, businesses and institutions must adapt. Industry digitization is reshaping the business landscape, which includes higher education and the development of related skills. As a result, universities and higher education institutions have transformed into technological hubs that equip students with the skills necessary for the future.

The adoption of Industry 4.0 is altering the education and skill requirements for personnel and redefining roles and responsibilities within higher education institutions. The digital transformation of these institutions is vital for their future success in an increasingly competitive environment, making adopting new tech-

nologies essential (Nguyen, 2018; Wildan et al., 2018). However, integrating digital transformation into existing strategies while effectively engaging and empowering students and academic staff poses significant challenges. In this context, artificial intelligence has emerged as a crucial element of the Fourth Industrial Revolution, providing innovative solutions to these challenges (Yau et al., 2023). As a rapidly evolving technology, artificial intelligence focuses on developing computational systems that can learn from their surroundings and exhibit intelligent, adaptive behavior (Christie & De Graaff, 2017).

Artificial intelligence (AI) is a transformative force that has significantly affected various fields, including education (Zawacki-Richter et al., 2019). The 2018 Horizon Report emphasized the growing importance of AI in education as a critical development (Educause, 2018).

AI applications enhance the personalization of the learning process (Cox et al., 2019; Kumar, 2019). By enabling tailored learning experiences, AI improves student focus and efficiency by providing content that meets individual needs (Qin & Wang, 2022). This personalization allows targeted education and customized materials while helping teachers and administrators make data-driven decisions through decision-support systems (Akinwalere & Ivanov, 2022). Another advantage of AI is its ability to automate administrative processes, which boosts institutional efficiency and supports strategic decision-making in educational management (Akinwalere & Ivanov, 2022). Additionally, AI-powered assessment systems utilize big data analytics to evaluate student performance with greater accuracy and detail, making educational processes more transparent and effective (Marengo et al., 2023). Furthermore, AI-based virtual and augmented reality technologies create interactive and immersive learning environments that enhance student engagement (Zheng et al., 2023; Wang et al., 2023).

However, the widespread integration of AI in education also poses several challenges. AI systems depend on accurate and complete data to ensure reliability. Existing algorithms may contain errors, and data deficiencies can limit the effectiveness of AI applications (Owoc et al., 2019). Moreover, due to the technical infrastructure requirements, educational institutions may encounter difficulties fully integrating AI solutions (Dhawan & Batra, 2020). A significant challenge is the lack of digital literacy, which restricts the effective use of AI in education. Teachers and students need adequate knowledge and experience to effectively utilize these technologies (Celik et al., 2022). Additionally, AI applications process personal data, raising concerns about privacy and security that may impede the

widespread adoption and full realization of AI's potential in education (Dhawan & Batra, 2020). Other challenges include high technology costs, integration difficulties, and infrastructure constraints (Rasul et al., 2023).

5 Barriers to digital transformation in universities

Nowadays, most universities are developing digitalization strategies, but these are primarily in their infancy. The digitalization process has uncertainties (Kopp, Gröblinger & Adams 2019). Whatever the digital transformation strategy put into practice, universities may face many challenges. To bring the digital transformation in higher education to life, a more concrete understanding of digital technology is required. Table 4 shows the possible list of barriers.

Barriers	References
Insufficient Digital Technology Skills	Thoring, Rudolph, & Vogl (2017), Gronberg (2017), Kaminskyi, Yereshko & Kyrychenko (2018), Akberi & Pratomo (2022)
Lack of leadership skills	García-Morales, Garrido-Moreno & Martín-Rojas (2021), Kaminskyi, Yereshko & Kyrychenko (2018).
Uncertain economic environment	Chipembele & Bwalya (2016)
The lack of vision	Stüber (2018), Butler (2018)
The lack of expertise in digital transformation	Bond et al. (2018), Rodrigues (2017)
IT Integration	Thoring, Rudolph & Vogl (2017), Schaffhauser (2017)

Source: Authors' work

Table 4: Possible Barriers to Digital Transformation in Universities

One of the main challenges is that universities do not have a strategic vision for digital transformation. A strategic vision is needed to implement digital initiatives to unify the institution (Ugur, 2020). A clear vision will enable employees and stakeholders to adopt and invest in digital transformation.

Inadequate digital technology skills are a significant problem. According to the KPMG report (2022), the most critical problem slowing down digital transformation is the lack of employees with sufficient digital skills. One way to bridge the digital skills gap is to train employees to adapt to the digital transition successfully. Lack of leadership skills is also essential. Digitization requires a set of

fundamental leadership skills. It is critical to plan and implement the digitalization process within the organization.

Another major challenge is the lack of digital transformation and IT integration expertise. Lack of IT integration slows down organizations and increases costs. Barriers to digital transformation in the higher education sector include a lack of digital technology skills, leadership skills, an uncertain economic environment, vision, and expertise in these areas.

6 Benefits of Digital Transformation in Universities

In addition to the challenges described above, using digital technology in higher education positively impacts education and teaching practices (Verhoef & Du Toit, 2018). This advantage is valuable because it forces higher education institutions to develop and maintain digital learning. Several benefits of the digital transformation of universities may be listed as follows (Table 5).

Benefits	References
Consolidate Resources	Petkovic (2018)
Improve Productivity & Efficiency	Benavides et al. (2020), Xiao (2019)
Reduce Costs	Petkovics (2018)
Grow enrollment	Alenezi (2021)
Increase Security	Hashim, Tlemsani & Matthews (2022)
Increase competitiveness	Seres, Pavlicevic & Tumbas (2018), Benavides et al. (2020), Mohamed Hashim, Tlemsani & Matthews (2022).
Enhance the Experience	Mikheev, Serkina, & Vasyaev (2021), Sandkuhl & Lehmann (2017)
Allow for data-driven evaluation and decision-making.	Fúzi & Géring (2022).

Source: Authors' work

Table 5: Benefits of Digital Transformation of Universities

In today's world, digitalization is a great budget saver. Digital transformation saves budget and reduces costs using the best resources because it generally takes a selective and structured approach. Digital transformation is used as a tool to improve students' experience and accessibility and to provide quality teaching (Powell & McGuigan, 2020).

7 Conclusion

In today's competitive higher education landscape, universities must embrace digital transformation. The COVID-19 pandemic has significantly altered the higher education sector globally, prompting institutions to adopt hybrid models of instruction. This digital transformation necessitates a robust technological infrastructure and training for faculty and students to utilize digital applications effectively.

Despite the urgency of digital transformation, many universities lack a clear understanding of how to initiate this process and, as a result, have not yet taken significant steps. Successful digital transformation involves technological solutions and requires a shift in the mindset of both users and organizations.

To remain competitive, universities should incorporate digitalization into their strategic plans by keeping pace with current technologies. Establishing technology development centers focused on research is crucial for addressing skill gaps. Additionally, academic staff should establish and support a well-defined digitalization policy to encourage the use of digital literacy and learning platforms.

The role of universities in the economy is expected to undergo significant changes in the next decade. With increasing competition in higher education, institutions must differentiate themselves through innovative business models to ensure sustainability.

Adopting and integrating new technologies in universities is essential for survival in today's educational landscape. Universities must keep up with current technological trends and incorporate these advancements into their strategies to maintain competitiveness. A key focus should be establishing technology development centers through research to address existing skills gaps. Promoting digital literacy among students and faculty is imperative, and academics should receive support. Additionally, support centers should be created to assist those who find it challenging to adopt digital technologies. Establishing a hub that evaluates digital transformation and recommends actionable steps can significantly benefit organizations.

The competitive edge of universities largely depends on their choice of a "digital university" model. Institutions that embrace modern technologies are better positioned to succeed. While many universities are developing individualized digital strategies to adapt to new technologies, relying solely on a single approach may not suffice for the success of higher education institutions. In order to thrive

in the digital age, universities must adopt a comprehensive strategic approach that encompasses the entire institution, not just its information technology aspects.

Digital transformation initiatives within universities should be led by top management and supported at various academic and administrative levels. For these initiatives to achieve their goals, instructors must possess the necessary skills and competencies.

In summary, universities should align their strategies with the University 4.0 model and prioritize development. Collaboration with stakeholders is essential for creating in-house information and solutions. Embracing an integrative University 4.0 concept will enable universities to address the innovations brought about by the rapidly evolving needs of the 21st century. In-house integration is crucial for facilitating a comprehensive digital transformation.

Within the scope of this study, the following suggestions can be considered in further studies and strategic digital planning of higher education.

- Understand that digital transformation affects every part of the university.
- Define a clear vision for embracing the digital age in the organization.
- Form and empower a committee to evaluate and manage the processes, e.g., institutional priorities, technology acquisition, distance and hybrid education, and digital transformation.
- Link all digital activities to the university's digital transformation strategy.
- Adopt a design approach forcing on users' needs, not the university's internal structure.
- Set plans to upgrade skills and competencies to efficiently use technologies rather than purely technology-oriented initiatives.
- Take steps to increase the career development of teaching staff of new technologies.
- Eliminate possible resistance to digital transformation by providing continuous training programs and setting a channel for feedback from the university staff.
- Encourage R&D studies concentrating on new technologies and supporting digital transformation.
- Create digital transformation offices or teams within the university.
- Implement management works (documents and business processes) with digital technologies.
- Direct higher education institutions to increase energy and workforce efficiency with innovative campus projects.

- Support the courses with new digital technologies, taking the necessary steps to sustain (hybrid learning creation of models)
- Open workshops for new technologies and introducing future technologies and business opportunities.

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