

العدد

1



مجلة الجامعة الإماراتية الدولية

مجلة علمية محكمة نصف سنوية
العدد الاول (يناير-يونيو) 2024م

أبحاث العدد:

Mokhtar Mohammed Ghilan
Faculty of Engineering and
Information Technology,

Conceptual Model
for Successful
D i g i t a l
Transformation in
Higher Education
Sector

Azal Univeristy for Human
Development,
Sanaá, Yemen.
mmghilan@gmail.com

Conceptual Model for Successful Digital Transformation in Higher Education Sector

**Mokhtar Mohammed Ghilan
Faculty of Engineering and
Information Technology,
Azal Univerisity for Human
Development,
Sanaá, Yemen.
mmghilan@gmail.com**

Abstractt

In today's digital world, with the speed of digital technology development, higher education sector digital transformation has become necessary to enhance its education services and maintain competitiveness capabilities. Thus, this research aimed to develop a conceptual model for successful digital transformation in higher education sector which indicate that the higher education sector needs to be perceived of benefits and challenges of digital transformation as well as achieved technological and organizational readiness to guarantee successful of this transformation.

Keywords: Digital Transformation; Opportunities; Challenges; Technological and Organizational Readiness

Introduction

Digital transformation (DT) is essential for organizations in today's digital world (Vial G., 2019). It has become a twenty-first-century phenomenon and become an essential field of business innovation and has an impact at all levels of business and society (Schallmo & Williams, 2018, Sascha Kraus etc all,2021). DT is a notion that embraces organizations of all sizes and types (Warner & Wager, 2019, Vahid Jafari-Sadeghi etc all,2021). It is a strategic process that leverages the advantages of contemporary digital technologies (Vial G.,2019). It is a way to rebuild business models according to customer desires using modern technologies to stay competitive in the Internet age (Ines Mergel, 2019).

In recent years, the effect of the COVID-19 pandemic has pushed many sectors to try to do their business online. Among these sectors is higher education. The digital transformation of the higher education sector is essential to compete and survive (Vahid Jafari-Sadeghi et al, 2021). Digitization of higher education has become a strategic goal for many universities (Nicole C. Jackson, 2019). Thus, it is more necessary for higher education institutions to keep pace with and integrate digital technologies into their business than in the past (Ines Mergel, 2019, Saeed Albukhitan, 2020).

There is no doubt that digital transformation has become an issue of great importance to all sectors around the world. Like business organizations, digital transformation for higher education institutions is essential to achieving competitive advantages. (Schallmo & Williams, 2018). It has become imperative for this sector to reconsider teaching and learning practices by leveraging digital technology (Fermín Navaridas-Nalda et al, 2020).

Digital transformation for the higher education sector is a significant in today's digital world, which became more evident after the COVID-19 pandemic, it become essential for overcome threats and enhance the capabilities and competitiveness of this sector.

Success in digital transformation may face critical issues because it is not simply about adopting innovative technology. So, this research sought to develop a conceptual model for successful digital transformation in the higher education sector to focus on the important factors that should be taken into consideration when this sector adopts digital transformation.

Literature Review

Digital transformation has become important and a phenomenon of the 21st century that is transformational in all traditional industrial contexts (Ford, Compton, Millett, & Tzortzis, 2017), affecting all levels of business and society (Schallmo & Williams, 2018).

Digital transformation (DT) is a planned change based on innovative technologies (Bresciani et al., 2021b). It can be described as a tool for transforming business processes, cultures, and organizational characteristics to achieve changing market demands because of technological development. Digital transformation is reshaping business models, influencing organizational cultures (Bader K et al, 2022).

In the recent period, digital transformation has gained importance as it is seen as a process of change and development that has an impact on all aspects of life, involving individuals and organizations. In this regard, and according to the most comprehensive and balanced concepts, digital transformation is a development process based on digital technology, resulting in value-added business models, and more efficient business processes leading to the improvement of services provided (Fadwa Zaoui & Nissrine Souissi, 2020). Digital transformation can also be seen as a link between the structural, strategic, and technological changes that are necessary to meet the requirements of the modern digital age.

Definition of digital transformation may vary depending on perspectives and beliefs (Reis et al, 2018). It can be defined as a new development model that calls for redefining relationships between organizations and clients (Parviainen et al, 2017). According to Vial, G. (2019) digital transformation is "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies".

Digital transformation changes the delivery mode of services and sets new forms of direct interactions with customers. It creates value as a transformation outcome (Ines Mergel et al, 2019).

It is important to note that there are terms such as digitization, digitalization and digital transformation that are related to different concepts but may be used synonymously and interchangeably. Digitization refers to the transformation of analog tools into digital representations. Digitalization refers to improvements with the integration of digital data. While digital transformation refers to disruptive and comprehensive changes in the organization based on digital technology.

Figure (1) shows the difference between digitization, digitalization, and digital transformation (Schallmo & Williams, 2018).

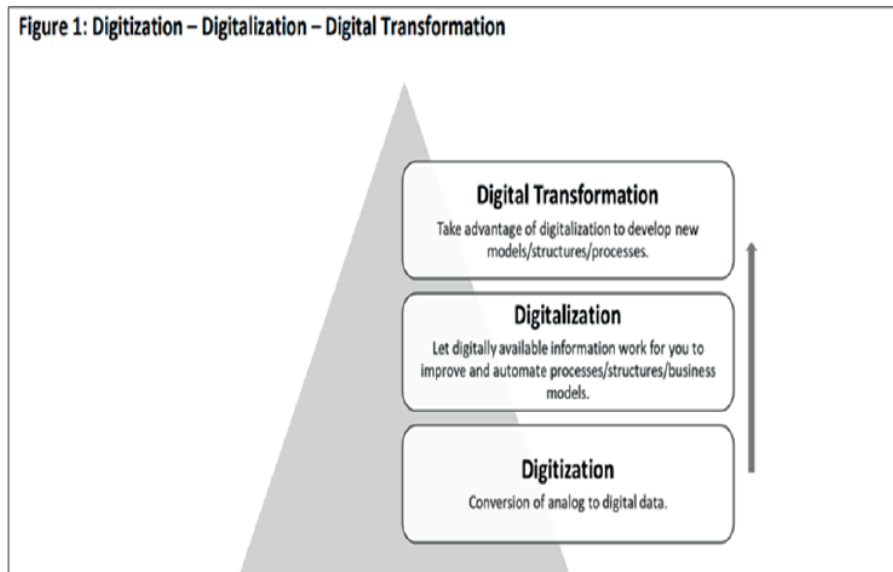


Figure (1) Digitization, Digitalization, and Digital Transformation

Marcus Fischer et al, 2020, summarizes the requirements of digital transformation as follows:

- Digital strategy for setting goals and actions.
- Agility to handle a dynamic environment.
- Digital expertise to handle complex tasks.
- Innovate IT to adapt to new technologies and benefit from them.
- Collaborate to communicate and collaborate with internal and external stakeholders.
- Openness and ensuring the sustainability of the transformation.

Higher Education Sector Digital Transformation

Undoubtedly, in today's era, higher education institutions need to be digitally transformed to keep pace with developments in today's world like other industries and business organizations. Therefore, digital transformation is emerging as one of the important priorities of higher education institutions like other business organizations to achieve competitive advantage.

The design of effective teaching scenarios using digital technology is of great importance considering the ongoing process of digital transformation in higher education. The digitization of higher education and the transition to digital university must be a strategic goal for many universities (Anne Lohr, 2021).

The development in the world of technology, which has contributed to the trend towards digital transformation in higher education institutions, has had a benefit to increase the level of communication between students and teachers, so it is expected that universities will be interested in developing technological infrastructure (Helena Santos, 2019).

Today, digital transformation has gained great importance, which has made higher education institutions adopt new technology and transform their practices and business models. Digital transformation in higher education institutions is centered on finding advanced methods and practices that are efficient and effective for the purpose of achieving the mission of higher education. Digital transformation has a connotation of technology, culture, creativity and change management. Digital transformation is more than the use of new technology (Vial, G., 2019).

Digitalization for higher education institutions will affect all their sectors so these institutions must work on Link all digital activities to the overall vision and strategy of the organization including the learning and investment environment in communities that willingly generate innovators with digital capabilities.

Digital learning can be seen as an opportunity for higher education to enhance their pedagogical curriculum and increase the quality of learning using online tools and simplify access to information, as well as remote exchanges and collaborations (Saeed Albukhitan,2020, Helena Santos, 2019).

According to (Kamal Kerroum etc all, 2020), the education sector is classically linked to old methods and practices and is therefore one of the last industries to initiate changes. Where there are many challenges that are difficult to overcome. Thus, Digital transformation in higher education institutions faces significant challenges related to the adoption of digital tools and technology in the teaching and learning process, in addition to changing and modifying systems, processes, communication methods, current channels and all academic and administrative activities.

Conceptual Research Model

There are many factors and issues that affect success in digital transformation process. Therefore to ensure the success of the digital transformation process in the higher education sector, researcher proposed a conceptual model showed in figure (2) Which indicates the importance of perceiving the opportunities for digital transformation process in higher education sector and the challenges that this sector may face when adopting this process, in addition to the importance of this sector being technologically and organizationally ready for the process of digital transformation.

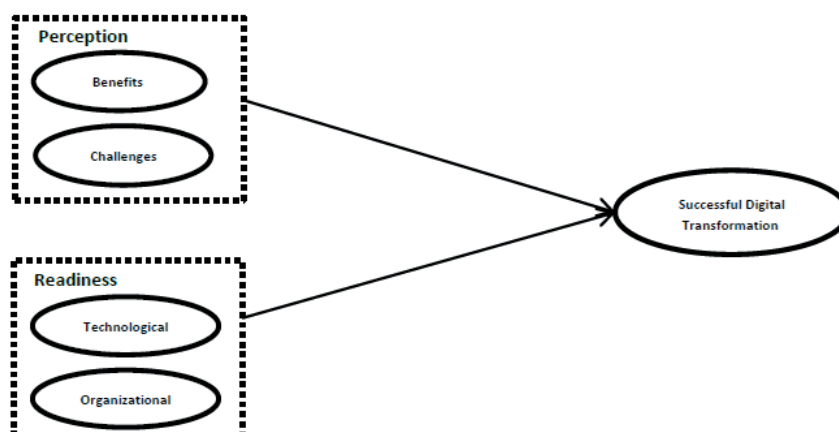


Figure (P) Conceptual Research Model

Higher education sector recognizing for these opportunities and challenges as well as its technological and organizational readiness will have a role in its success of the digital transformation process.

Conclusion

Digital transformation in the higher education sector has become an urgent necessity in today's digital world, and there is no doubt that digital transformation in the higher education sector will have many benefits and will face many challenges. Digital transformation is not only a technological transition or the use of modern technology, but it is a comprehensive process associated with Organizational change. Therefore, to ensure the success of the digital transformation process in the higher education sector, this sector needs to be aware of the benefits and challenges and be technologically and organizationally ready

References

Anne Lohr, Matthias Stadler, Florian Schultz-Pernice, Olga Chernikova, Maximilian Sailer, Frank Fischer, Michael Sailer, On powerpointers, clickerers, and digital pros: Investigating the initiation of digital learning activities by teachers in higher education, *Computers in Human Behavior*, Volume 2021 ,119

Bader K. AlNuaimi, Sanjay Kumar Singh, Shuang Ren, Pawan Budhwar, Dmitriy Vorobyev. "Mastering digital transformation: The nexus between leadership, agility, and digital strategy" , *Journal of Business Research*, 2022

Bendik Bygstad, Egil Øvrelid, Managing two-speed innovation for digital transformation, *Procedia Computer Science*, Volume 2021 ,181, Pages 126-119,

Fadwa Zaoui, Nissrine Souissi, Roadmap for digital transformation: A literature review, Procedia Computer Science, Volume 2020 ,175, Pages 628-621,

Fermín Navaridas-Nalda, Mónica Clavel-San Emeterio, Rubén Fernández-Ortiz, Mario Arias-Oliva, The strategic influence of school principal leadership in the digital transformation of schools, Computers in Human Behavior, Volume 2020 ,112

Helena Santos, João Batista, Rui Pedro Marques, Digital transformation in higher education: the use of communication technologies by students, Procedia Computer Science, Volume ,164 2019, Pages 130-123,

Ines Mergel, Noella Edelman, Nathalie Haug, Defining digital transformation: Results from expert interviews, Government Information Quarterly, Volume 36, Issue 2019 ,4.

Kamal Kerroum, Azeddine Khiat, Ayoub Bahnasse, Es-Saadia Aoula, Yousaf khiat, The proposal of an agile model for the digital transformation of the University Hassan II of Casablanca 4.0, Procedia Computer Science, Volume 2020 ,175, Pages 410-403,

Matt, C., Hess, T., Benlian, A., 2015. Digital transformation strategies. Bus. Inform. Syst. Eng. 343–339 ,(5) 57.

Marcus Fischer, Florian Imgrund, Christian Janiesch, Axel Winkelmann, Strategy archetypes for digital transformation: Defining meta objectives using business process management, Information & Management, Volume 57, Issue 2020 ,5.

Nicole C. Jackson, Managing for competency with innovation change in higher education: Examining the pitfalls and pivots of digital transformation, Business Horizons, Volume 62, Issue 2019 ,6, Pages 772-761,

Parviainen, Päivi, Tihinen, Maarit, Jukka Kääriäinen, and Susanna Teppola. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. International journal of information systems and project management 77-63 :(1)5. DOI: 10.12821/ijispm050104

Reis, João, Amorim, Marlene, Nuno MELÃO, and Patrícia Matos. (2018). Digital transformation: a literature review and guidelines for future research. In World conference on information systems and technologies. Advances in Intelligent Systems and Computing :745 421-411. Springer, Cham.

Sascha Kraus, Francesco Schiavone, Anna Pluzhnikova, Anna Chiara Invernizzi, Digital transformation in healthcare: Analyzing the current state-of-research, Journal of Business Research, Volume 2021 ,123, Pages 567-557

Saeed Albukhitan, Developing Digital Transformation Strategy for Manufacturing, Procedia Computer Science, Volume 2020 ,170, Pages 671-664.

Schallmo, D. R. A., & Williams, C. A. (2018). Digital transformation now! - Guiding the successful digitalization of your business model. Cham: Springer Briefs in Business.

S. Bresciani, K.H. Huarng, A. Malhotra, A. Ferraris, Digital transformation as a springboard for product, process and business model innovation *Journal of Business Research*, (2021) 128, pp. 21-204

Vahid Jafari-Sadeghi, Alexeis Garcia-Perez, Elena Candelo, Jerome Couturier, Exploring the impact of digital transformation on technology entrepreneurship and technological market expansion: The role of technology readiness, exploration and exploitation, *Journal of Business Research*, Volume 2021 ,124, Pages 111-100

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, ,(2)28 144-118.

Warner, K. S., & Wager, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 349-326 ,(3)52.



EMIRATES
INTERNATIONAL
*** UNIVERSITY ***

منعاء - حدة - شارع بيروت    Eiuniversity
هاتف : 01432222-781232222  <https://eiu.edu.ye>