The Role of Agile Administrative Leadership in Enhancing the Effectiveness of Digital Transformation in Palestinian Higher Education Institutions

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Abstract

The study aimed to understand the role of agile leadership in enhancing the effectiveness of digital transformation and its impact on improving performance and increasing efficiency in higher education institutions in Palestine. This was achieved by presenting theoretical frameworks for the role of agile leadership in digital transformation at universities. This was achieved by developing Palestinian universities to keep pace with digital transformation by applying the dimensions of agile leadership. This was achieved by providing a digital information network that supports digital transformation and is connected to global networks. The study concluded that agile leadership at universities focuses on preparing human resources to implement digital transformation, providing qualified personnel capable of using and analyzing data to make effective decisions, and being able to select human competencies and scientific expertise. It bears the burdens and efforts of data management and monitoring, as well as providing appropriate tools for statistical analysis and future forecasting, and reconciling internal resistance from employees and conflicting opinions. Flexibility and calm agile leadership help establish an effective framework that ensures optimal implementation of digital transformation. This includes internal and external alignment in operational processes and improve and develops the professional performance of faculty members through the provision of information. The use of self-critical thinking skills in analyzing problems and issues has a positive impact on improving performance. The study recommended the need to save time and accelerate the learning process to reduce the burden on faculty in traditional education for exams, marking, and results so that they are completed electronically..

Keywords: *Agile Leadership, Digital Transformation, Higher Education.*

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Introduction

Change has become a constant in our contemporary world, which is characterized by continuous evolution and transformation. Institutions across all sectors face numerous and diverse challenges, both in nature and scale, due to the rapidly changing environment. Whether institutions are prepared for these changes or not, transformation and change remain an inevitable reality affecting everyone. The form and patterns of management, business, and industries have changed from former times across all educational and service activities. This has forced institutions to face the choice of either adapting to this reality, embracing it, and leveraging it to their advantage, or resisting change.

The transformation in educational methods and approaches is a shift that places the onus on institutional leadership to activate and keep pace with its developments to avoid falling behind in the technological transformation. Agile leadership has demonstrated its capability to address these challenges and work towards their implementation through its core dimensions: patience, composure, wisdom, objectivity, and humility. Agile leadership is considered a contemporary concept, highlighted by numerous intellectual studies emphasizing its importance and the prominence it has recently gained (Hussein & Al-Zubaidi, 2021).

For institutional cultures to change and for the digital transformation journey to succeed, institutional leaders must not view technology merely as a support tool, but rather as a strategic capability that enables the organization to adapt and possess a competitive advantage that distinguishes it from others (Rogers, 2016).

The importance of agile leadership in universities is further amplified by the characteristics and nature of our current era, marked by rapid change and alteration in all aspects of life. In addition to this is the increase in the size and scope of institutions, which necessitates the presence of effective administrative leadership capable of managing these institutions to achieve their goals and steer them towards development and progress (Hawwad & Salhi, 2016).

Given that higher education institutions are in a state of evident evolution and transformation across all administrative, scientific, and technical fields-foremost among them being information and communication technologies, which represent one of the most significant modern challenges facing university education-it has become imperative for universities to shift towards digital teaching and learning. This has become an imperative necessitated by rapid changes, the massive digital technological revolution, and the knowledge flow. Since educational institutions, particularly higher education, both influence and are influenced by their surrounding environment, digital transformation was bound to impact them. Consequently, they must adapt, like other institutions, to this variable and leverage it to their advantage, owing to the advantages it offers in enhancing overall performance levels. Therefore, university leaders cannot overlook it, as higher education institutions are moving towards digitizing most of their operations to keep up with the latest developments in their environment. Agile leadership must take this into account by developing a well-considered strategy and plans

for its proper implementation. Digital transformation for business organizations in the current age is an imperative necessity. For this reason, institutions in both the public and private sectors seek to adopt digital transformation as a strategy, given its ability to contribute to solving human problems on one hand, and activating and enhancing sustainable development on the other. This positions technology as a facilitating and stimulating factor in all these aspects, encompassing numerous dimensions including economic, environmental, social, and cultural (Al-Mutrif, 2020).

This study seeks to examine the impact of agile leadership with its dimensions-patience, wisdom, objectivity, composure, and humility-which aim to improve performance and increase responsiveness by enhancing the effectiveness of digital transformation among leaders, staff, and administrators in higher education institutions in Palestinian society. The study will be applied to a selected university as a model. The goal is to reach findings and recommendations that could contribute to increasing the effectiveness and promotion of digital transformation in universities through agile leadership.

Theoretical Framework and Literature Reviews
Agile Leadership (The Independent Study Variable)
1- **The Nature and Dimensions of Agile Leadership**

The Nature of Agile Leadership: This study seeks to understand the concept of Agile Leadership as an independent variable, including its dimensions-Patience, Humility, Wisdom, Composure, and Objectivity-which aim to achieve performance improvement and enhanced responsiveness in universities amidst digital transformation. It is considered one of the most important modern styles, defined by an administrative organization›s ability to perform rapidly in its routine administrative work methods, striving for better performance and continuous improvement of the administrative process within an agile framework and nimble performance based on work teams and administrative groups. This aims to achieve swift response to and overcoming of challenges, striving for outputs characterized by high performance, quality, and excellence (Adhm, 2020). From Agile Management emerged both Agile Leadership and Organizational Agility; my current study addresses Agile Leadership through its role in improving, developing, and enhancing the professional performance effectiveness of employees.

The Concept of Agile Leadership: Agile Leadership is an administrative style and a main approach for the development and sustainability of any institution. It focuses on the positive behavior of the leader, thereby influencing the behavior of employees and guiding them to commit to achieving the institution's goals. It involves inspiring employees to offer their best. Consequently, Agile Leadership encompasses a set of human, ethical, and motivational aspects in dealing with subordinates. The leader plays a significant role in promoting a spirit of cooperation and their ability to persuade others of the necessity to accomplish tasks effectively in a suitable environment (Hajira, 2019).

Agile Leadership relies on three pillars through which institutions can be managed:
- The ability to understand and perceive future trends, changes, and possibilities.
- Building effective dynamic capabilities.
- Promoting an agile culture by eliminating bureaucracy and any work or practice that leads to rigidity and weakness. When optimal coordination and integration among these three pillars is achieved, organizations can maintain their position, seize more opportunities, and achieve leadership and pioneering status (Abu Hammad, 2019).

Furthermore, the concept of Agile Management is one of the best methods for achieving quality in uniquely delivering services by combining the teachings and regulations of the place with the development of flexible work, and then by adopting the standard work criteria known for its rigidity and inflexibility, alongside the standard of employee flexibility in handling or acquiring skills for more than one task simultaneously. It also involves venturing into sectors previously considered red lines in terms of commercial competition concepts, namely education, with its multiple elements and studied determinants (Rakkaj et al., 2017).

Because the leadership style adopted within universities, whether administrative or academic, effectively influences the behavior and performance of employees-helping to motivate staff, increase their effectiveness, achieve a high level of productivity, and raise the level of functional performance-it indicates that shifting towards using the principles of Agile Leadership within universities will have a significant impact on raising and improving the functional performance level of university staff (Al-Indunisi, 2019).

In light of the foregoing, the researcher defines Agile Leadership as that administrative style through which the leader can adapt the institution or university to new developments in methods, approaches, and technological programs. This is achieved by using the dimensions of Patience, Wisdom, Humility, Objectivity, and Composure in dealing with university staff, which helps improve performance and increase its quality through flexible interactions, stimulates employee loyalty to their work, and fosters a sense of responsibility for achieving the institution's goals and keeping pace with new developments via modern technological devices and means. This is alongside preparing employees to adapt through guidance, patience, and training courses to achieve development, advancement, and elevate the university to a better level in educational methods that ensure the efficiency and success of the educational process.

2- Dimensions of Agile Leadership

Numerous researchers have addressed the dimensions of agile leadership, which can be outlined as follows:
- **Leadership Wisdom:** This refers to the agile leader's use of rationality in dealing with employees and in their approach to solving complex administrative issues they seek to control (Al-Saedi, 2017). An agile leader can achieve a balance

between the available human, material, and moral resources and the requirements of the work (Al-Fetlawi, 2017). Wisdom represents an advanced stage for the agile leader, characterized by thinking based on logical and objective reasoning regarding the nature of their decisions, relying on their practical experience. This aims to reach a standard of wisdom in dealing with the various administrative issues they face (Govindi, 2015).

- **Humility:** A quality that distinguishes the agile leader, it is a moral trait and virtue indicating how to think about and handle problems in the workplace, aligning with the personal characteristics of the agile leader that are accepted by employees, and which foster the integration of individuals into their surrounding community (Al-Fetlawi, 2017). The humility of an agile leader means flexibility, simplicity, and gentleness in dealing with the institution's employees, prioritizing their needs, and having a constant desire to achieve the best (Kazem, 2020).

- **Patience:** This dimension entails the leader embodying Islamic behaviors through patience in enduring the behaviors of other employees. The agile leader accepts some delay in fulfilling needs or achieving certain goals, justifying this delay due to circumstances or the targeted goals of the organization that are planned for fulfillment (Kupfer, 2007). This trait also means the agile leader's ability to exercise self-control, enabling them to persist in work, exert maximum effort, persevere, and stay informed to achieve the required goals, and to face challenges at work without despair or complaint under working conditions (Kazem, 2020).

- **Objectivity:** This dimension involves the agile leader being characterized by rationality in their interactions and consistently regulating their administrative behavior in situations they encounter within the organization (Abdel Rahman & Al-Imam, 2009). Objectivity relates to the rationality in the leader's ability to influence the minds of employees and steer their behaviors towards improvement (Al-Fetlawi, 2017). It also encompasses the leader's ability to maintain a realistic perspective and keep personal bias to an absolute minimum (Kazem, 2020).

- **Composure (Calmness):** Practicing gentle and calm leadership (Kinsey, 2010) can be achieved by using thinking skills for self-criticism in analyzing problems and issues, and dealing with them simultaneously. The trait of composure is a rare quality in human life due to life's diversity, the abundance of work, and the problems facing administrative organizations. Hence arises the importance of having the trait of composure in agile leadership within the institution, especially when making important decisions. Composure enables the leader to think deeply and more effectively to make correct decisions in solving problems (Al-Fetlawi, 2017).

3- Tools Utilized by Agile Leadership in Management

Numerous tools can be employed by agile leadership to achieve its goals and ensure the success of its administrative processes. These tools are based on the leader's management philosophy, which aims to solve various work problems, including wasted effort and time. The most prominent of these tools are:

- **First: Determining Production Time (Takt Time):** Agile leadership, through its dimensions, seeks to define the necessary time for production processes, avoiding either a shortage or surplus in this production. This aims to address waste and eliminate problems in this aspect and to align work with the actual demand for the production process (Larry, 2012).

- **Second: The Jidoka System:** This is a pioneering philosophical system for agile administrative processes, based on providing quality for these processes. The system aims to detect potential defects and errors in administrative processes, identifying them early and resolving them. It is founded on multiple principles for improving quality in administrative work, summarized as follows:

  • **Direct Inspection:** Inspection involves monitoring and overseeing work quality and outputs. Agile leadership conducts this monitoring without the need for specialized quality controllers.

  • **Root Cause Analysis:** This involves monitoring these administrative processes, identifying errors, understanding their causes and how they occur, and working to develop solutions and address the root causes of these errors.

  • **Clear Responsibility:** It involves pinpointing errors, when they occurred, the sources of defects, and identifying direct responsibility for their occurrence through clear, practical, and organized steps.

  • **Stopping at the Point of Necessity:** This principle involves detecting and identifying defects, and halting administrative processes until problems within the administrative environment are resolved.

  • **Work Standardization:** This means that administrative processes are specified and have a degree of clarity in their main steps, to ensure that performance errors do not occur. It contributes to saving effort and time and creates more positive outputs with a higher level of quality (Barac, Aleksandra, 2010).

Commentary on Previous Studies:

Through the presented studies, it was found that there are a number of points of agreement and disagreement between those studies and the current research. Some of these are mentioned below:

1- **Agreements:**

- The current study agrees with the study by (Benavides et al., 2020) in some objectives, namely identifying the challenges facing higher education institutions.

- It agrees with previous studies on the importance of applying agile leadership in public and private platforms.

- Most previous studies followed the descriptive-analytical approach, which is the methodology adopted in the current study.

2- **Differences:**

- The current study differs from previous studies, including Al-Khatib (2021), in its **application context**, due to the scarcity of available Arab or foreign studies conducted in the Palestinian context.

- It differs in **directly combining the two study variables** (Agile Leadership and Digital Transformation) into a single study.

- It differs from most previous studies in terms of the **study population**, as it is applied in a different sector (Palestinian higher education).

- The current study differs from previous ones in that it examines the two variables to understand the **impact of Agile Leadership on enhancing and activating Digital Transformation** in Palestinian higher education institutions.

From the above, the most important distinguishing aspect of the current study is its uniqueness in **combining Agile Leadership and Digital Transformation in the context of Palestinian higher education.** This addresses a clear gap in the existing literature regarding this specific geographic and institutional focus

Research Problem and Questions

Given the significant role of agile leadership in enhancing the effectiveness of digital transformation, which has become an imperative in Palestinian universities due to the numerous advantages it provides for raising and improving performance levels across all aspects, it is essential to focus on the role of agile leadership as an effective method for transformation and change. This is because leaders, by virtue of their positions and responsibilities in managing universities, must adapt to new technologies and modern methods that require the digitization of transactions within the educational process. This is crucial for enhancing student achievement, realizing better performance, and improving the quality of education, facilitated through leadership dimensions such as motivation, intelligence, and creativity.

To achieve the study's objective, the research problem has been formulated in a main question: **What is the role of agile leadership in enhancing the effectiveness of digital transformation in Palestinian higher education institutions?**

From this main question, the following sub-questions emerge:

- What is the nature and what are the dimensions of agile leadership in Palestinian universities?
- What are the methods of agile leadership in enhancing the effectiveness of digital transformation in universities?
- What are the challenges facing agile leadership in implementing digital transformation in universities?
- What is the impact of agile leadership on promoting and activating digital transformation in universities?

Study Objectives

The study aims to investigate the role of agile leadership in enhancing the effectiveness of digital transformation in universities-a tangible reality that must be adapted to-and to attempt to keep pace with the new global changes and transformations characteristic of our era, which is undergoing noticeable daily modernization. This has become a necessity for leadership, heads of departments and administrations, faculty members, and university staff alike. Therefore, the study objectives are as follows:

- To identify the nature and dimensions of agile leadership in universities.
- To recognize the methods of agile leadership in enhancing the effectiveness of digital transformation in universities.
- To clarify the challenges facing agile leadership in implementing digital transformation in universities.
- To identify the statistical differences among the study sample individuals regarding the reality of improving the performance level of agile leadership and the variable of digital transformation.
- To identify the statistical differences among the study sample individuals regarding the reality of the effectiveness level of agile leadership performance from the viewpoint of the study sample individuals, attributed to the digital transformation variable.

Significance of the Study

The study derives its importance from the significance of agile leadership in managing higher education institutions in Palestine, due to its influential role on society. These institutions prepare generations capable of keeping pace with contemporary developments to contribute to achieving development and progress in line with technological transformation, especially digital transformation in educational administrations. Therefore, the study's topic- concerning the impact of agile leadership on enhancing the effectiveness of digital transformation-is considered one of significant importance for higher education institutions.

Theoretical Significance: The current study derives its importance from the benefits achieved by agile leadership in university education, which include:

- Working to meet labor market needs, achieving universities' competitiveness, and optimizing human and material resources.

- Attempting to benefit educational decision-makers in university education institutions by introducing agile leadership as a new administrative style that may assist them in developing their management methods for their educational institutions.

- Its importance also stems from the scarcity of Arabic studies in the field of agile leadership, which is characterized by its novelty, thereby enriching the Arabic library with this study, as it is a pioneering study that will address and present the elements of agile leadership and their application in Palestinian universities.

Practical Significance: This study coincides with the increasing commitment of countries in our current era to developing university education and the role of agile leadership in promoting it through the adoption of modern educational methods, by:

- Attempting to utilize its findings in a manner suitable for universities.
- Seeking to benefit stakeholders in higher education in applying advanced mechanisms for agile leadership in universities.
- The current study may contribute to developing the skills of those responsible for leading university education institutions.

Study Hypotheses

The study is based on the main hypothesis that an independent variable-**Agile Leadership**-influences the dependent variable-**Digital Transformation in Higher Education**. Specifically, it investigates how the role of agile leadership enhances the effectiveness of digital transformation. From this main hypothesis, several sub-hypotheses are derived:

- The study expect that a positive relationship will be found between the application of agile leadership management and improvements in both institutional performance and the effectiveness of digital transformation initiatives within universities.

- The study expect that specific methods of agile leadership that lead to improvement in both job performance and the effectiveness of development within universities.

- The study expect that the research will identify a set of specific challenges (such as cultural resistance, budgetary constraints, or legacy systems) that are anticipated to pose significant obstacles for leadership in successfully achieving the digital transformation of universities.

- The study expect that the various dimensions of agile leadership (e.g., adaptability, visionary guidance, and employee empowerment) will be shown to have a significant and positive impact on promoting and activating digital transformation within the specific context of Palestinian universities

Study Methodology

To achieve the study's objectives, the researcher will adopt an **Analytical Descriptive Approach**. This methodology combines the precise description and analysis of phenomena with the examination of relationships and interactions between the study variables. It aims to identify the features, characteristics, and dimensions of the research problem, deduce causes and results, and develop solutions based on data and analysis.

This will be accomplished by gathering a substantial amount of information and theoretical methodologies related to digital transformation in universities internationally, through studies and research conducted on agile leadership in universities. The goal is to synthesize the findings of this research and access information and data from the theoretical literature relevant to the study topic, including results from previous studies. The approach integrates elements of descriptive and analytical methods to meticulously examine phenomena, in addition to analyzing relationships and interactions. It seeks to determine the features, causes, and characteristics of the research problem phenomenon and its variable dimensions-namely, agile leadership as the independent variable and digital transformation as the dependent variable. This is undertaken in an effort to understand the influence and role of agile leadership in promoting and activating digital transformation in universities.

The Dependent Study Variable (Digital Transformation)

1- **The Nature of Digital Transformation in Universities**

Concept of Digital Transformation: Digital transformation is defined as a strategic and deliberate method of reorganizing an organization›s operations-for example, business models, organizational structure, and human resources-and leveraging data, applications, and digital capabilities to facilitate the experience of beneficiaries and consequently achieve greater benefit and return. The Organisation for Economic Co-operation and Development (OECD, 2019) views digital transformation as a process involving numerous digital technologies, such as fifth-generation (5G) technology, artificial intelligence, big data, and blockchain technology, which form a system that gives rise to future economic and social changes.

Digital Transformation in Education: It has been defined as the process that relies on the widespread use of information and communication technology (ICT) in the educational environment, impacting all components of the educational organization. This includes new roles for educators, teaching and learning strategies, methods of presenting educational content to learners, and their assessment methods (Mahmoud, 2018).

Sebaaly (2018) defines digital transformation in universities as the use of new technological developments-such as new cloud computing applications, social media via mobile devices, virtual reality, and multimedia for teaching and learning processes, as well as for research and development-to excel in service delivery and enhance the university's competitive advantage. The concept of digitization involves a technical and cultural shift that impacts all areas of the university's work and promotes new methods, approaches, and opportunities that shape universities. Digital transformation means the use of new educational technology by faculty members to implement radical changes in the university educational process through platforms that enhance effective communication, student activities, preparation of study materials, assessment tests, and the physical configuration of classrooms (Limani, 2019).

Brooks & McCormack (2020) argue that digital transformation in universities is more than merely transferring paper records to a computer and adopting technologies to perform operations faster and more efficiently. It is a series of deep, coordinated cultural, workforce, and technological shifts that enable new educational and operational models and transform the institution's business model and strategic directions for delivering value-add across the entire institution. This requires innovative leadership at all levels, as well as coordination between units, flexibility, and agility that will expand the patterns of higher education. Digital transformation in higher education involves a strategic effort at all university levels, encompassing the planning, implementation, and adoption of an integrated technological system supported by data analysis to improve student educational continuity and graduation rates. Digital transformation is not a single initiative or project; it must be continuously and selectively iterated to become the digital culture and approach that the university can use to achieve many of its strategic goals (Miller, 2019).

The core of digital transformation in universities is seen to lie in fundamentally changing the mode, pattern, and nature of interaction and engagement among faculty, staff, students, and beneficiaries. It additionally necessitates the organization and restructuring of various services and transactions electronically, to eliminate bureaucracy in performing tasks and public duties and to link them to the needs of beneficiaries and various community institutions through ICT networks, which provide the infrastructure for achieving quality (Amin, 2018).

From the preceding definitions of digital transformation in universities, it is clear that it is a global trend for transforming all universities into digital universities that rely on technology in performing their tasks, functions, and various activities, thereby achieving progress and a competitive advantage among universities.

2- **Advantages of Digital Transformation for Universities**
   - Possessing all the elements of uniqueness necessary for competitive advantage that make them distinctive.

-   Owning high-level information technology that is globally classified.
-   Borderless in delivering its services in an integrated manner, allowing everyone in universities and individuals worldwide to benefit from them.
-   Grants universities the ability to adapt to the fast-changing and diverse business environment.
-   Networked organization of its work nature and its connection to numerous individuals inside and outside the university, both locally and globally.
-   Characterized by transparency and integrity due to clear roles, responsibilities, and daily decision-making within universities without relying on the traditional hierarchy.
-   Renders university services in an integrated form that can be utilized by all universities and individuals (Ali, 2013).

3-   The Importance of Digital Transformation in Universities

The importance of digital transformation for universities lies in its ability to harness the potential of technology capable of instigating change in the entire university education system-its means, patterns, resources, philosophy, policies, roles, and curricula-to the extent that enclosed lecture halls and libraries based solely on physical books are diminishing. This leads to the emergence of universities without walls, digital libraries, and other concepts born from information and communication technology. Digital transformation is a bridge towards new knowledge, enriching the educational process, and renewing educational systems (Zaher, 2007).

Digital transformation has necessitated that institutions leverage modern technology to become more flexible in their operations and more capable of innovation and renewal. With these characteristics, they can keep pace with contemporary changes and harmonize with evolving needs legitimately to successfully achieve the desired outcomes of their work (Sha'lan, 2016). Digital transformation has become a hallmark of university life, enabling universities to contribute to solving the cost crises they face and work on increasing participation and cooperation among students, thereby fostering creativity (John, 2013).

Furthermore, digital transformation helps improve the university's competitive advantage internationally, enhances the student experience and their performance, centers learning around the student, reduces dropout rates, improves the quality of teaching and scientific research, and increases innovation through classrooms. It also enables more efficient student employment and retention, improves registration and enrollment processes, and enhances administrative and educational operations while reducing costs. This is linked to improving the institution's reputation, optimizing resources, and competing with leading peers (Sebaaly, 2019).

4- **The Role of Agile Leadership in Enhancing Digital Transformation**

University agile leadership faces numerous difficulties in attempting to adapt the university to digital transformation. Consequently, the agile leadership style must rely on the core elements of digital transformation in universities. The digital transformation of the university education system is not solely about technology; it also necessitates a change in institutional culture and the employment of appropriate technology to develop organizational elements in a coordinated manner, within a framework for the digital transformation of the following elements:

- **Technologies:** Utilizing a system of hardware, data, and storage that operates within IT environments and data centers, allowing for the use of all assets with uninterrupted operational efficiency. This requires ensuring a service level suitable for university affiliates.

- **Data:** Agile university leadership is expected to undertake efforts to manage and analyze data regularly and effectively. This is to provide reliable, complete, and high-quality data and procedures, alongside suitable tools for statistical analysis, data mining, and future forecasting, as well as the development of these tools. Continuous monitoring of the data is also essential to ensure its utilization aligns with the university›s goals.

- **Human Resources:** This constitutes a vital aspect without which universities find it difficult to implement digital transformation. It requires providing qualified personnel capable of using data and making effective decisions. This also involves planning the vision and implementing it with human competencies possessing scientific and practical expertise, coupled with a belief in development and change.

- **Establishing an Effective Technological Infrastructure for University Processes:** This allows for the development of both internal and external performance to ensure the optimal application of digital transformation. Implementing this includes achieving internal and external alignment and the necessity of having controls for process completion (Daniel et al., 2018).

These elements are essential necessities that interact with each other to support the transformation of universities from traditional structures to digital structures reliant on information and communication technology.

5- **Objectives of Enhancing Agile Leadership for Digital Transformation in Universities**

A study by (Ebert & Duarte, 2018) confirms the existence of a set of main objectives for digital transformation on both economic and social levels, which can be summarized as follows:

- Developing and enhancing a more innovative and collaborative culture at the industry and societal levels.

- Transforming and developing education systems to provide new skills and guiding individuals towards the future, enabling them to achieve excellence in the digital workplace and society.
- Focusing on establishing and maintaining digital connectivity infrastructure, while ensuring its management and accessibility.
- Ensuring affordability, service quality, and availability.
- Protecting and enhancing digital data, and preserving transparency, trust, and autonomy.
- Facilitating access to and improving the quality of digital services provided to the community.
- Creating innovative new business models based on the application of electronic systems.
- Increasing the generation of productivity, income, and added value in the economy (Shehata, 2020).

Before agile leadership can enhance the effectiveness of universities in implementing a successful digital transformation strategy, it needs tangible objectives to work towards. These objectives include (Amin, 2018):

- **Enhancing Student Experience:** Focusing on improving student metrics, such as graduation rates, course success rates, and other indicators signaling the success of the experience.
- **Improving Competitiveness:** Focusing on distinguishing the university›s competitiveness through the use of digital methods.
- **Creating a Culture of Data-Driven Decision-Making:** This involves adopting a digital mindset across all university departments and activities for students, faculty, leadership, and staff.
- **Optimizing Resources:** This goal covers everything from improving communication between officials to reducing costs associated with electricity usage.
- **Developing the Professional Performance of Faculty:** Equipping them with modern skills and attitudes by providing information and diverse resources.
- **Saving Time and Speeding Up the Educational Process:** It reduces the pressure and workload on faculty and their assistants compared to traditional teaching methods, by enabling the electronic completion of courses, exams, grading, and results.
- **Improving Education Quality:** Based on enhancing the quality of courses and educational programs and redesigning them according to global standards.
- **Equality and Equity in Educational Opportunities for All Students:** Giving them the right to participate in learning, dialogue, discussion, and freely expressing their opinions on educational topics.

- **Disseminating Quality Education:** Accommodating the largest number of learners without any restrictions, as it is borderless, and independent of place and time (Spear, 2020).

6- **Advantages of Enhancing Agile Leadership and Digital Transformation in Universities**

Digital transformation is considered a means to improve university efficiency and quality of performance, as it leads to the development of the university and all its programs and services. Therefore, the advantages of digital transformation in universities lie in various aspects, including the following:

- Providing decision-making requirements more efficiently and effectively to achieve integration between the university's core functions.
- Focusing on developing opportunities to invest the university's human and material potential, which contributes to developing the university system and achieving global competitiveness.
- Developing leadership performance through the emergence of information management that enables the achievement of principles like empowerment, accountability, integrity, and transparency.
- Helping to provide new activities and services, which adds value to the university and generates significant revenue.
- Achieving both administrative and economic efficiency through the integration of numerous processes while optimizing human and material resources.
- Managing time effectively by saving time and effort in obtaining information.
- Opening many new fields and specializations for learners that are not available in traditional education.
- Improving education, its efficiency, and quality by leveraging modern technologies and ICT.
- Providing accessible education for everyone at a lower cost, while considering individual differences.
- Reducing the pressure on traditional universities with limited space to accommodate increasing student numbers.
- Facilitating student announcements via the internet, test correction, and sending results to them (David, 2018).

7- **Requirements of Agile Leadership for Implementing Digital Transformation in Universities**

Digital transformation changes our way of life and work through the interaction of robotics, automation, and other technological learning tools. Educational institutions face the challenge of maintaining a learning system that implements a culture of continuous learning driven by emerging technologies, in addition to the ability to lead

practical and creative education, and incorporate new educational models for students, teachers, and the entire educational process. It also enhances creativity and entrepreneurship, representing an opportunity to increase educational coverage and institutional productivity.

The digital transformation of universities requires numerous administrative, organizational, and technical requirements, in addition to qualified human resources capable of dealing with information technology, support from top university leadership, and many other requirements. Ali (2013) indicated several requirements for digital transformation, which are as follows:

- Universities must define their vision for what they want to become in the future.
- Developing a clear and methodological plan for transformation to achieve the desired vision and goals.
- The existence of leadership and administrative support for digital transformation efforts through focused leadership and all officials involved in technology-related administrative processes, and providing the necessary human, financial, and material resources and legislation.
- Developing the existing organizational structure by moving away from complex hierarchies and establishing flexible organizational structures focused on effective teamwork within universities (Al-Dahhan, 2013).
- Building a specific strategy for digital transformation based on analyzing university needs, strengths and weaknesses, and scanning threats in the external environment.
- Focusing on the technological dimension by renewing the core IT infrastructure and providing modern hardware and diverse software.
- The need for human resource development by enhancing the skills and capabilities of employees through training programs and self-development (Al-Sayed, 2020).

8- Challenges Facing Agile Leadership in Enhancing and Activating Digital Transformation in Universities

Based on the theoretical and scientific explanations of the study variables concerning agile leadership and digital transformation, the researcher identifies numerous challenges facing agile leadership when applying digital transformation within the institution, aimed at improving performance and increasing employee effectiveness. These challenges include:

- **Weak Digital Infrastructure:** Some higher education institutions suffer from weak digital infrastructure, such as poor internet networks and a lack of digital devices. These obstacles significantly affect the institutions› ability to adopt modern technological solutions.

- **Lack of Strategic Objectives and Planning:** Failure to set strategic goals for digital transformation, coupled with a lack of study regarding the feasibility of implementing the process effectively and the suitability of the surrounding environment and available technologies. Some also overlook setting specific standards to measure progress, whereas it is essential to set clear, easily measurable goals.
- **Digital Divide:** A digital gap exists between urban and rural areas among staff, as many remote areas lack internet connectivity, which reduces opportunities for learning via digital platforms.
- **Insufficient Professional Training:** A lack of adequate professional training that qualifies individuals to use digital education tools and artificial intelligence.
- **Lack of Arabic Digital Content and Awareness:** A shortage of digital content in Arabic and consequently a lack of awareness regarding how to integrate AI into educational curricula.
- **Poor Change Management Planning:** Inadequate planning for the change period is a major reason for the failure of digital transformation implementation, including failing to follow up on developments and update them, and merely providing modern technologies without a strategic approach. Also, a lack of awareness of potential challenges the institution might face.
- **Internal Resistance and Conflicting Opinions:** The presence of internal resistance from some employees and conflicting opinions among management, stemming from many employees› ignorance of the benefits of change and differing viewpoints among managers. Misalignment of goals can lead to the failure of implementing the digital transformation strategy, potentially causing clashes between senior management and internal teams.
- **Rushed Implementation:** Hastily implementing digital transformation without collecting necessary information can cause the plan to fail. Additionally, rushing the transformation process without adhering to the correct steps and expecting quick results, combined with a lack of knowledge about digital transformation technologies and failure to consult specialists.
- **Lack of Expertise and Trained Workforce:** Insufficient experience regarding the needs for modern machines and technologies, requiring study for mastery. Consequently, a shortage of trained workforce can cause digital transformation to fail.
- **Cultural Resistance within the Organization:** Employees may resist change, especially when it involves adopting new technologies or altering established processes.
- **Skills Gaps and Workforce Readiness:** Digital transformation requires new skills and competencies that may not be available in the current workforce.

Upskilling or reskilling employees is necessary to ensure they possess the required digital literacy, data analytics skills, and technical expertise to support transformation initiatives.

- **Legacy Systems and Integration Challenges:** Clinging to old systems used by organizations that were not designed for the digital age. Integrating new digital technologies with existing systems can be complex and difficult. Legacy systems may lack compatibility, require significant customization, or hinder data sharing and collaboration, impeding the progress of digital transformation efforts.

- **Cybersecurity and Data Breach Concerns:** Many institutions lack robust cybersecurity measures. When undergoing digital transformation, they become more vulnerable to cyber threats and data breaches. The increasing reliance on digital systems, interconnected devices, and cloud-based services exposes institutions to potential security risks. Implementing strong cybersecurity measures, conducting regular audits, and educating employees on best practices are crucial.

Through interpreting and analyzing the dimensions of the study variables, the researcher believes that digital transformation is the responsibility of agile leadership. It must work to integrate digital technology into all aspects, requiring changes in the technological, cultural, and operational fields related to the educational process, whether at the level of leaders, department heads, or university staff. It is essential to intensify efforts by those working with agile leadership to benefit from emerging technologies and the rapid expansion of human activities. Consequently, universities must reinvent themselves and transform all their processes, placing the strategy for digital innovation in technology and modifying all institutional cultures among their priorities. This includes encompassing all new learning spaces, big data, and artificial intelligence as educational resources, adding value to interconnected issues in higher education. This big data allows students to discover trends related to new teaching methods, such as adaptive learning, which generates personalized education derived from collecting student data related to age, habits, or behavior, among others, so that the university integrates with this digital transformation under agile leadership

Study Results

- University leadership-including deans, department heads, and administrative directors-can leverage the dimensions of agile leadership (Wisdom, Patience, Humility, Composure, and Objectivity). These traits, beneficial and influential in interactions with staff, aid in implementing digital transformation, enhancing staff capabilities, and fostering greater engagement with university development initiatives.

- The use of **Wisdom** in leadership for sound planning enables performance improvement, the development of human resources, and the provision

of qualified staff and faculty. This creates a workforce capable of using and analyzing data to make effective decisions for implementing digital transformation.

- The **Patience** exhibited by agile leadership in universities helps in bearing the burdens and efforts of managing technological data, monitoring it regularly and effectively. This ensures reliable and complete data is available, along with suitable tools for statistical analysis, data mining, and forecasting, aligning with the university›s goals.

- Leadership **Objectivity** helps in reconciling internal resistance from long-serving employees attached to traditional methods with the inputs of new technology, and conflicting opinions arising from staff›s lack of awareness about the benefits of change. Its role is clear in resolving differing viewpoints.

- The **Patience** and **Wisdom** of agile leadership in dealing with staff interactions concerning new inputs address feelings of frustration and misalignment between staff goals and university objectives. This enables the implementation of the digital transformation strategy and prevents clashes between senior management and staff teams within the university.

- The flexibility and **Composure** of agile leadership help establish an effective technological infrastructure. This allows for the development of both internal and external operations, ensures optimal application of digital transformation, achieves internal and external alignment, and maintains oversight over process completion. This, in turn, improves and develops the professional performance of university faculty by providing diverse information and resources.

- The **Humility** of leaders in considering staff ideas when analyzing problems and issues positively impacts increasing effectiveness, improving performance, and enhancing fruitful cooperation between staff and leadership. This fosters consensus on shared university goals and facilitates crucial decision-making.

Recommendations

- The necessity of fostering relationships and interactions between leadership and university staff, removing barriers between department heads, faculty, and other employees, and resolving any issues related to staff effectiveness in conjunction with university development.

- The necessity of holding regular meetings or workshops involving all staff, providing a platform for expressing opinions, exchanging views, and sharing suggestions among all stakeholders-the dean, faculty, department heads, and staff-functioning as an integrated team.

- Provision of necessary technologies by agile leadership to activate digital transformation. This involves using a robust system of hardware, required

data, software, storage, and technological information centers that allow the efficient utilization of all existing assets with new operational efficiency to ensure a good and suitable service level for university affiliates.

- Saving time and accelerating the learning process to alleviate the burden and hardship on faculty members and their assistants associated with traditional teaching methods. This involves transitioning tasks like course management, exams, grading, and results to electronic platforms.

- Utilizing **Objectivity** to improve education quality by enhancing the quality of courses and educational programs, ensuring their design is based on international foundations and standards to apply the principles of active learning quality.

- Ensuring leadership **Objectivity** in achieving equality and equal educational opportunities for all students to participate in the learning process, discussion, dialogue, and freely expressing opinions on educational topics. Emphasis should be placed on providing adequate professional training on using digital education tools and artificial intelligence within the university.

- Demonstrating **Humility** in understanding and addressing student needs to prevent deficiencies in digital content, which affects awareness of how to integrate artificial intelligence into curricula.

- Careful planning by agile leadership for the changeover period, following up on developments, working to update systems, and not merely limiting efforts to providing modern technologies. Leaders must anticipate challenges the institution might face during the digital transformation process.

- Applying **Wisdom** in bridging skill gaps and preparing the workforce for the requirements of digital transformation. This involves providing new skills and competencies within the workforce, upskilling employees, or retraining them to ensure they possess the necessary digital literacy, data analytics skills, and technical expertise to support transformation initiatives.

- Using the **Wisdom** of agile leadership to raise cultural awareness and overcome adherence to legacy systems not designed for the digital age. Integrating new digital technologies with existing systems is crucial to prevent compatibility issues with old systems that hinder data sharing and collaboration, thus obstructing the progress of digital transformation efforts.

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