

University of Bahrain

**College of Business
Administration**



**Department of
Management and Marketing**

Exploring the Influence of Digital Transformation on Employee Behavior During COVID-19

Thesis submitted in partial fulfilment of the requirements for the
degree of M.Sc. in Business Administration

Prepared by:
Rana Mohamed Mubarak
ID: 20010296

Supervised by:
Dr. Muzaffar Asad
Assistant Professor
University of Bahrain

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Defense Committee's Approval.

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Deanship of Graduate Studies
And scientific Research



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Thesis Discussion Committee Decision

Student Name: Rana Mohamed Mubarak	Student ID: 20010296
Department: Management & Marketing	College: Business administration
Program: Masters in Business Administration	
Thesis Title: Exploring the Influence of Digital Transformation on Employee Behavior During COVID-19	
Supervisor Name: Dr. Muzaffar Asad	Student GPA: 3.63

The Discussion Committee met on 26-Jun-22 In Online. Upon discussing the student whose details are stated above in public, the discussion committee recommends the following:

pass

The student is awarded a grade - in the thesis subject.

- ☐ Without making any changes to the thesis.
- ☒ After making the modifications attached with this decision.

Discussion Committee Members Approval:

Name

1. Dr. Muzaffar Asad (Advisor)
2. Dr. Makarand Upadhyaya (Internal Examiner)
3. Dr. Ather Azim Khan (External Examiner)

Signature

Muzaffar Asad

Makarand Upadhyaya

Ather Azim Khan

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Abstract

Purpose: The purpose of your study is to explore the influences of digital transformation on employee behavior during the COVID-19 pandemic in the education sector in the Kingdom of Bahrain.

Design/methodology/approach: The method used to conduct this thesis was to conduct a qualitative analysis through two methods: focus group and in-depth interviews on Bahrain schools in order to enrich the literature on this concept and to discuss how the influence impacted the employee's behavior and assist them in adapting to the digital transformation during COVID-19, the pandemic.

Findings: The findings show that the pandemic had an influence on employees, particularly in the early stages of the crisis. However, as the digital transformation began to be implemented and plans began to be put into action, teachers demonstrated great engagement despite their fair and even went above and beyond what was expected. The main internal influences that impacted the employee's behavior either positively or negatively are leadership, digital literacy, and working from home. In addition to teachers' privacy, teachers face many challenges due to these factors.

Research limitations/implications: This will focus on the influences of digital transformation on employee behavior limited to the education sector in Bahrain.

Practical implications: This research lays the groundwork for identifying the most significant internal influences during COVID-19 to consider in order to overcome the problems that arise during and post the pandemic, and how to take advantage of the lessons learned and the challenges on a larger scale and across different sectors as much as possible.

Originality/value: This thesis makes key recommendations toward closing the gap between the challenges introduced as a result of the pandemic and digital transformation and their influence on employee behavior.

Recommendation: To enhance the digital employee experience by improving the digital culture and work from home concept.

Keywords: Digital Transformation, Leadership, Digital Literacy, Work from Home, Pandemic, COVID-19, Digitalization, Employee Behavior, Employee Engagement, Employee Satisfaction, Employee Performance

Dedication

I dedicate my thesis heartily and proudly to my parents, Mohamed Mubarak and Fareeda Althawadi who made me who I am today, My Husband Hamad Omran for being my inspiration and for his endless support, and my sisters for all the encouragement I got during writing my thesis.

Acknowledgment

From the conception of the topic until the final submission of the thesis, I have gained a lot of experience in many aspects. It has been a real challenge that has been both motivating and encouraging.

Many people have helped with this project, and it would not have been feasible to finish it without them. First and foremost, I want to thank my supervisor, Dr. Muzaffar Asad, for always supporting my thesis and for his patience, excitement, encouragement, and scientific contributions that helped me finish this work.

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CHAPTER 1

INTRODUCTION

Chapter 1: Introduction

1.1 Overview

One of the most significant technological and environmental revolutions is digital transformation (Foerster-Metz et al., 2018). Its emergence has led to a qualitative leap in the performance of businesses in most sectors and the introduction of better and faster services to citizens (Barthel & Hess, 2019). This dramatic change in the way business is delivered has put pressure on organizations to rapidly shift their business performance and offer their services from traditional to electronic offices (Bumann & Peter, 2019). The pandemic, on the other hand, introduces added pressure and urgency as it has a major influence on the speed of the adaption of digital transamination in many sectors (Kovar, 2020). Digital transformation is about knowledge and skills, not just information technology (ICT) (Tabrizi et al., 2019). It requires high flexibility in employee behavior and agility for learning by both employees and top management (Eden et al., 2019). This is considered a change in the organizational environment that requires a change in management strategies (Zoppelletto et al., 2020), organizational structures (Leonhardt et al., 2017), business flows, business models, and organizational culture (Vial, 2019).

The education sector is one of the most crucial sectors that was impacted and influenced by the digital transformation during the COVID-19 pandemic (Varshney, 2020). Because the world is at a standstill due to the lockdown in 2019, and teaching has literally ceased for a short period of time, governments around the world immediately accelerated the implementation of digital transformation and switched to online learning at all levels, from primary education to higher education around the world (du Toit & Verhoef, 2018). In the education sector, the digital transformation is a gradual process and tends to be slow. In general, traditional physical attendance was a preference until the

pandemic, but it became a priority in the spring of 2020 because of COVID-19. This introduces an unexpected challenge to both teachers and students (Bogdandy et al., 2020). To overcome these challenges, governments around the world escalated the digital strategy with ad-hoc solutions to resume the education process, then started the proper planning and enhanced approach.

Digital transformation is a must-do change in any organization. However, many of them fail to achieve this strategy due to the resistance of their own employees (Tabrizi et al., 2019). It is considered the biggest risk of digital transformation, and when employees think that digital transformation could hurt their careers, they may fight the changes consciously or unconsciously (Varshney, 2020).

The COVID-19 pandemic has emphasized the necessity of digital transformation. The pandemic's causes were the limiting of employees' movement and the selective shutdown of business and government buildings (Boulton, 2021). Apart from health problems, the COVID-19 pandemic has triggered an economic and social catastrophe, which has been particularly severe on service businesses (Bogdandy et al., 2020). Because of all the security measures and the lockdown, many employees had to change how they work or provide services from home (Mhlanga & Moloi, 2020).

The purpose of this research is to focus on the digital transformation influences of leadership, digital literacy, and the concept of working from home on employee behavior during the COVID-19 pandemic in the education sector in the Kingdom of Bahrain. These factors are illustrated further in explaining the research factors in chapter two. Figure 1 illustrates the research gap.

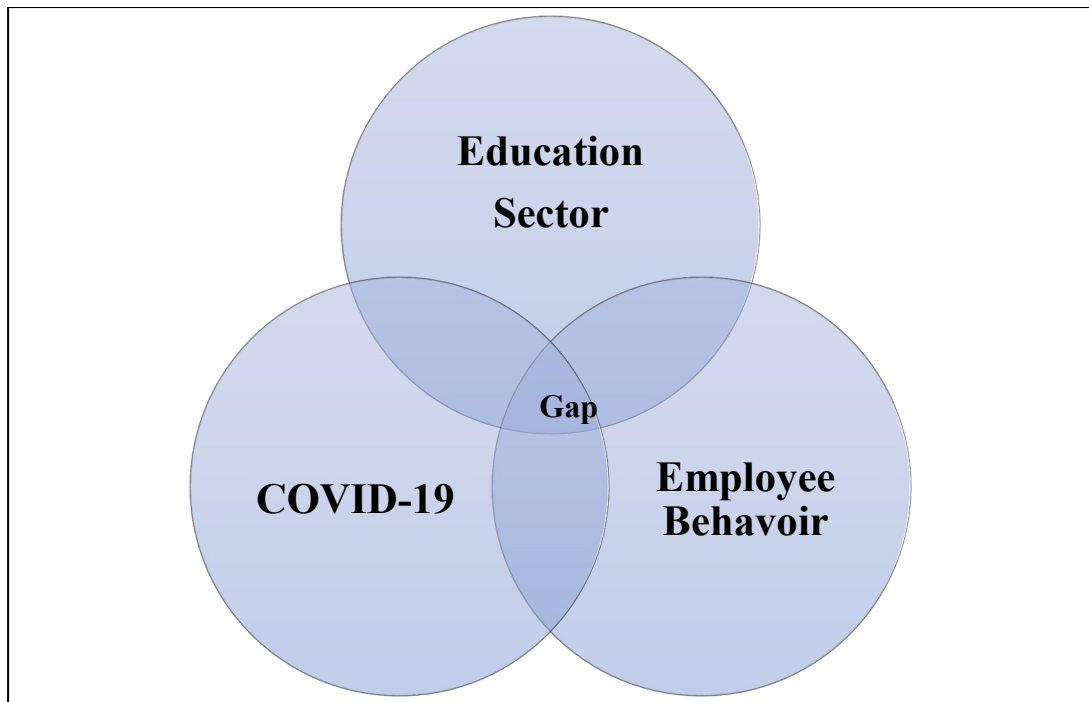


Figure 1: Research Gap

- 1- Need for proper guidance and leadership encouragement
- 2- Absence of digital literacy
- 3- New way of working from home and lack of proper instruction

1.2 Research Problem

In much literature, professional interest in digital transformation and business systems has concentrated on technology or external forces affecting organizations, while overlooking the employees who are the most important key who will drive the full journey (Cetindamar Kozanoglu & Abedin, 2020).

The main concern is that digital transformation has a direct impact on employees' acceptance and the success of the implementation of digital transformation in any organization. Therefore, one of the main dimensions in this study to focus on is the employee's agility and their willingness to be involved in

the success of the digital transformation journey, especially the teachers and principals who are the focal members in transferring education to the students. So, it is important that they are open to digital change so that they can make it easy for the students (Kumar, 2016).

One more gap that the study addresses is how leadership influences the employee's behavior positively or negatively, especially with the new factors of working from home or online learning using any of the digital transformation means (Bartsch et al., 2020).

The lockdown introduces the concept of virtual workplace or online learning, even though it is not a new concept. However, it was enforced on the employees with several types of online learning tools with very little or no prior training. Therefore, this study will focus on how working from home impacted the behavior and performance of the education employees during the pandemic. This also includes the factor of digital literacy or employee development on digital transformation, as well as how each education employee managed to restart the education process after the lockdown, and how the organization takes all measures to encourage their employees on new technologies in order to have a better organization performance during the pandemic and in the long run (Varshney, 2020).

Finally, as the overall world is changing toward digital transformation with or without the pandemic, and the government plays a major role in enforcing the digital transformation and specialty in education as it is building the future workforce, this study is to focus on the influence of digital transformation enforcement employees' behavior.

1.3 Research Questions

1. What is the concept of digital transformation? (Kumar, 2016)
2. What are the influences of digital transformation on employees' behavior? (Tabrizi et al., 2019)
3. How does digital transformation impact employee behavior during the pandemic? (Mhlanga & Moloi, 2020)

1.4 Research Objectives

The main objective of this research is to explore the influences of digital transformation on employees' behavior during the COVID-19 pandemic in the education sector, utilizing the Kingdom of Bahrain as a case study, the research aims to:

1. To identify how the digital transformation influences employees' behavior.
2. To understand the consequences of the pandemic on employees' behavior.

1.5 Significance of the research

This study will be very beneficial for organizations that aim to understand the scope of the digital transformation and move forward from traditional systems and methodologies to cope with the rapid changes and technologies (Tolboom, 2016). It focuses on rising technologies and understudies the holistic point of view and its implications on employees' attitudes to driving the change (Hartl & Hess, 2017). The study of digital transformation can lead top management to strategize the initiative in a very appropriate manner that fits the organization even after the pandemic (Sow & Aborbie, 2018). In fact, they can take the lessons learned and all the pitfalls encountered in practicing digital transformation during the COVID-19 period and see how it evolves the education sector in particular,

in addition to the environmental and financial savings in education resources. Moreover, it can benefit educational institutions at any level who intend to continue using digital transformation for all their functions or even partially to understand what could influence their employees' behavior in order to make their journey successful. Furthermore, they know how to provide their employees with the necessary support and training to ensure a successful digital transformation implementation and effective business process performance (Tolboom, 2016). Finally, the majority of literature draws attention to the digital transformation, its technology, and mostly organizational behavior. However, there is less study that focuses on the relationship between digital transformation and employee engagement, quality of work, feelings, and performance. Goswami and Upadhyay (2019) say that this is why it's important to find out how digital transformation affects employee engagement.

1.6 Research Steps

1-Conducted a review of the most recent literature related to the digital transformation concept, focusing on its influences on employees' behavior in the education sector, and what its consequences are on employee behavior during COVID-19, the pandemic.

2-Study the Three influences (leadership, digital literacy, and work from home concept) that impact on employees' behavior.

3-Following the understanding of the current situation, to conclude the implications of adapting digital transformation on employees' behavior, both positive and negative.

4-Collecting data to find the relationship between the three factors during COVID-19 on employees' behavior in the education sector. This will be done by performing focus group sessions to gain the perspective of employees on their

perceived opinion of how digital transformation impacted their behavior, in addition to interviews with teachers, ambassadors' teachers.

5-Analyze and compare the results of the focus groups and the interviews with the findings from the literature.

6-Based on the feedback from the interviews and focus group, will setup a conclusion and recommendation propose area for future research.

1.7 Research Limitation

This research focuses on the behavior of teachers toward digital transformation during the pandemic in the education sector of Bahrain with limitations.

1. limited to teachers and ambassador teachers.
2. limited to the education sector.
3. limited to the Kingdom of Bahrain.
4. limited to internal factors.

1.8 Thesis Structure

Throughout this thesis the flowing is the structure:

- 1- Introduction
- 2- Literature Review
- 3- Research Methodology
- 4- Findings and Discussion
- 5- Conclusion, Recommendation and Future Work

Chapter 2

Literature Review

Chapter 2: Literature Review

2.1 Defining Digital Transformation

Digital transformation is the process of merging technology all over the business units and processes, which can lead to better value for the users or customers (Legesse et al., 2018). It is also the realignment of business needs and technologies to provide a better experience to customers (KUMAR, 2016). Boulton (2021) also agrees that the term "digital transformation" refers to a fundamental shift in the way a business provides value to its users or customers. Digital transformation is not only about automation; it is also a cultural change that requires organizations to continually challenge themselves, experiment, and get comfortable with failure. It covers four areas: business process, business model, domain, and cultural change (Digital Transformation Guide, 2015). Digital transformation is defined as an organizational change toward big data, analytics, cloud, mobile, and social media platforms. These are the changes that are built and driven by digital technology (Vial, 2019).

Usually, organizations are always finding a new way to meet rapidly changing customer requirements, and most of these responsibilities are motivated by cutting-edge technology and innovation (Gadhavi, 2020). As a result, digital transformation has become a must for businesses today. It is not simply a method of integrating digital technologies or automating manual procedures. In reality, it reimagines how firms employ methodologies and technology to achieve dramatic improvements in business performance (Boulton, 2021). Organizations are always changing and adapting to the changing business environment. Digital transformation allows organizations to embrace the changes brought about by digital technology, bringing about revolutionary improvements to corporate operations, procedures, and value creation (Vial, 2019).

It is also considered a strategy that organizations plan to use to position themselves in the digital economy. The Digital Transformation Strategy complements the business strategy and the functional strategy. There are three stages for an organization to reach digital transformation: first digitization, then digitalization, and finally digital transformation (Maltaverne, 2017).

The term "digital transformation" is frequently used to refer to the requirement to use new technologies in order to remain competitive in the Internet age, in which services and goods are supplied both online and offline. The transition of online services is viewed as a means of increasing customizability and automation through standardization. Others define digital transformation as a process of reimagining company models in response to client requirements through the use of new technology (Mergel et al., 2019).

2.2 Digital Transformation Means (Tools)

Digital transformation tools are the instruments used to facilitate the technology part of transformation (process, strategy). These include programs, websites, and online resources that make activities easier to execute (Monsallier, 2021). These tools allow the user to open, view, and elaborate on the data online anytime and anywhere. These tools can only function when connected to the internet or a private network (Weaver et al., 2021).

2.2.1 Digital Transformation Technology in General

Digital transformation became a must-do for corporations in 2019 because of COVID-19. It has reshaped the how's and why's of several organizations (MindsterDX, 2022). However, with all of this buzz, organizations are unsure which technology is best suited to their needs (Monsallier, 2021). Digital

transformation comes with many technologies that all aim to transform work and make life easier while reducing costs as much as possible (Tabrizi et al., 2019).

The technologies are summarized but not limited to those in the below table.

Table 1: Digital Transformation Technologies

Technology	Definition
Internet of Things	Network of physical items referred to as "things" that are integrated with sensors, software, and other technologies with the purpose of connecting to and sharing data with other devices and systems over the internet in real time (MindsterDX, 2022)
Cloud Computing	Cloud computing is the Internet-based delivery of various services, such as data storage, servers, databases, networking, and software. Cloud-based allow organization to obtain immediate scalable services with minimum cost and management on demand (Liu & Darbandi, 2021).
Artificial Intelligence	Artificial Intelligence about bringing human capabilities and characteristics to machines like understanding language, learning, reasoning, solving problems (Wijayati et al., 2022).
Big Data & Analytics	Big Data is referring to massive and complicated data volumes that vary in size, variety, and rate of growth (Ahmed & Ameen, 2017) that will be used in Analytics is the analysis of large amounts of data in order to identify patterns, interconnections, trends, and preferences, among other relevant information (McLeod et al., 2017).
Next generation Security	Next generation relate to the detection of new threats using current technologies such as artificial intelligence, machine

	learning, and behavioral analysis that that encompasses both cyber and physical security and takes a proactive, adaptive approach (Vijayakumaran et al., 2020).
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2.1.2 Digital Transformation Technology in Education Sector

The COVID-19 pandemic affected the education sector globally. Around 1.5 billion students, or 90% of all primary, secondary, and university-level learners worldwide, are physically unable to attend school (LeewayHertz, 2022). This really encourages and enforces the sector to use and speed up digital transformation immediately (Mhlanga & Moloi, 2020). Since the pandemic forced many teachers to study at home and teach online, technology has become an important tool to support home learning. With the rising use of online classrooms and video conferencing systems, educational institutions have begun to recognize the importance of digital transformation in the education sector (LeewayHertz, 2022). Technology and education have made strides in improving the education sector. Thus, technology serves as an accelerator for learning in education (MindsterDX, 2022). Technology has made a significant contribution to improving the quality and atmosphere of learning, and it has many forms. During the COVID-19 pandemic's emergency, educators and governments devised many technologies as part of digital transformation and implemented them immediately in a short time (Noor Coutts et al., 2020). These technologies include but are not limited to:

1- *Online Learning technology like zoom, Microsoft Teams*

A few years ago, video conferencing was only used for emergency meetings, as a way to avoid business trips, or more for social communication (Rio-Chillcce et al., 2021). This was changed with the arrival of the virus and the closure of all educational institutes. This resulted in an immediate need for all levels to rely on

online learning through its use (Gladovi et al., 2020). There are many platforms used by teachers that include Zoom, Google Meet, and Microsoft Teams. The use of Zoom and other commonly used Microsoft Teams Zoom is a solution that enables teachers to orchestrate an online classroom that enables students to interact efficiently (Weaver et al., 2021). The Microsoft team is also an online learning platform that was utilized heavily during the pandemic. It also serves as an excellent integrated teaching and learning area (Kazemian & Grant, 2022).

2- e-Learning

E-learning is a method that students can utilize to study and have access to electronic media or electronic resources at any time, which includes prerecorded lectures, assignments, PowerPoints, books, discussion, and interaction with others that can be used both in class and remotely (Ho et al., 2020). An example of e-learning in the Blackboard application used by the University of Bahrain, one of the well-known high education universities in the Kingdom of Bahrain (UOB, 2021). The UAE government established an eLearning platform called "Madrasa" that is accessible for all students in kindergarten through grade 12 (UAE, 2021). It is a free eLearning portal with Arabic language videos covering general science, arithmetic, biology, chemistry, and physics. Additionally, over 50 million Arab students worldwide have access to the platform via the internet. Students may access the platform via the Madrasa app, which is accessible on iTunes (UAE, 2021).

3- AI-driven Online Assessments

With the digital transformation and the pandemic forcing the transition of education from pen and paper learning to an online platform, this also enforces the need to change the way assessment is being performed. To measure learning results (LeewayHertz, 2022), therefore, colleges and schools may turn to artificial intelligence and machine learning online assessment to avoid any bias or cheating (Tan et al., 2021). Artificial intelligence (AI) employs neural networks and deep

learning algorithms to enable computers to learn from their experiences and execute human-like tasks (Ahmed & Ameen, 2017). The assessment system is taught to analyze photographs of the examinee collected during the examination and compare them to the candidate's information given, flagging inconsistencies to avoid impersonation (LeewayHertz, 2022). Additionally, an AI-based online assessment system may lock down the app where the exam is being administered, preventing students from navigating away from the assessment.

2.3 Digital Transformation Journey

The reality is that the majority of businesses are not digital natives (Gadhavi, 2020). The organization usually faces a huge challenge and hassle to replace the manual business process and transform digitally. This is usually due to one main reason, which is the resistance of the organization's employees and their strong behavior to stop any changes and work in their comfort zone (Legesse et al., 2018). Herein comes the power of having a digital transformation strategy to complement the business strategy, which can provide as much as possible of a seamless experience as a result of a solid digital transformation plan in place (Bharadwaj et al., 2013).



Figure 2: Digital Transformation Journey (Gadhavi, 2020)

Gadhavi (2020) emphasizes that digital transformation is all about the journey, which begins with formalizing the strategy, developing the employee's skills, or attracting the expert and the skills, then studying the various technologies available in the market, such as the Internet of Things, cloud computing, electronic services, mobile services, completely moving to the cloud, or considering a hybrid setup. Following the evaluation, the organization can then diversify between the technologies that enable them to achieve their objectives. According to Warner and Wäger (2019), one of the most important steps in the digital transformation journey is involving employees and working on their behavior by initiating a cultural plan and communicating their culture to the employee, as well as involving the employee in the creation of this digital culture, and finally, being serious about digital transformation implementation and committed to the change.

2.3.1 Digitization, Digitalization, Digital Transformation

A different way of describing and embossing digital transformation in an organization is identified by Verhoef et al. (2021) as a journey to digital transformation and change of employee behavior and organizational culture. Describe the journey with three phases: digitization, digitalization, and digital transformation (Vendraminelli et al., 2022). Many studies agree that the first two stages of this journey are the foundation and critical to achieving the most comprehensive phase of digital transformation (Loebbecke & Picot, 2015; Matt et al., 2015; Fernando & Gallardo, 2020).

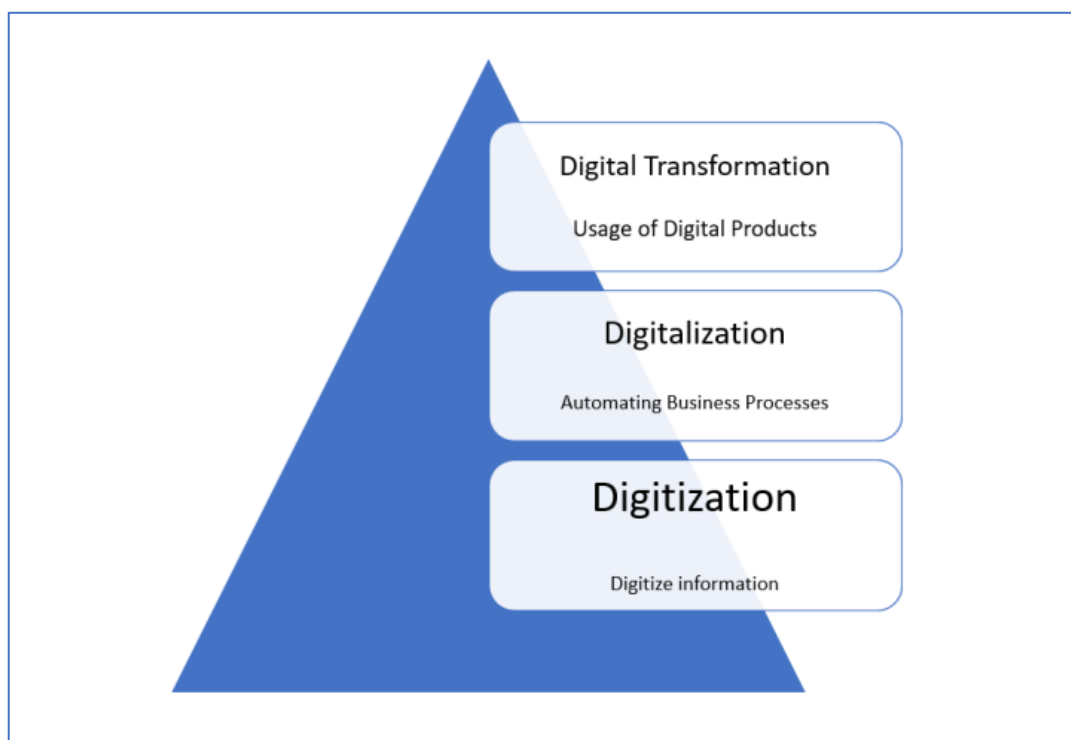


Figure 3: Digital Transformation Journey (Malak, 2021)

Digitization is the transition from analog to digital jobs, or the integration of information technology into existing businesses (Matt et al., 2015). Additionally, research defines digitization as the process of converting analog

data to a digital representation that computers can store, process, and send (Fernandez & Gallardo-Gallardo, 2020). On the basis of the above, we define digitization as the process of transforming the organization's internal and external documentation and processes and procedures using information technology without affecting the value and actual result of the activity (Loebbecke & Picot, 2015). Many examples related to digitization include the use of digital forms in ordering procedures, the administration of digital surveys, and the administration of internal financial disclosures using digital apps (Vendraminelli et al., 2022), scanning paper documents, converting wet signatures to electronic, and converting a paper map to digital (Malak, 2021). As for this phase's benefit, it can be provided. Faster access to information enhances the way the data is being stored. It makes it easier to combine data, and it costs less to store (Zeshan et al., 2021).

Digitalization refers to the process through which information technology or digital technologies are applied to modify current business operations (Malak, 2021). For instance, the development of new internet or mobile communication channels that enable all users to communicate easily with businesses and alter typical firm-customer relationships. This type of development frequently entails the organization's introducing a culture change and sociotechnical structures using digital artifacts that would not have been conceivable without the use of digital technology (Slawsky, 2010). Information technology plays a critical role in digitalization by enabling businesses to exploit new business opportunities or smooth the work by altering traditional business processes such as communication, distribution, and customer relationship management (Loebbecke & Picot, 2015). Through digitalization, businesses optimize current business processes by enabling more effective coordination of activities and/or by adding value to customers through improved user experiences. As a result, digitalization is not only about cost reductions; it also encompasses process enhancements that

may improve client experiences (Maltaverne, 2017). In the education sector, digitalization is the process of using all kinds of technology for teaching students, which includes desktop computers, mobile devices, the Internet, software applications, and other forms of digital technology. In addition to converting the test and exam to online testing, online universities, e-books, and artificial intelligence learning are just a few instances of how education has become more digitalized in the modern era (Siemens Digital, 2021). As for the benefits of the digitalization phase, it allows the organization to have better and faster decision-making. It could improve employee or customer satisfaction and improve productivity (Malak, 2021).

The digital transformation phase is the most ubiquitous and refers to an organization-level shift that results in the emergence of new business models that may be innovative or new to the organization (Verhoef et al., 2021). In this phase, the organization can really attain a competitive advantage and gain value from the transformation (Kovar, 2020). Digital transformation impacts the whole organization and its methods of operation. Going beyond digitalization, it is the modification of routine organizational procedures and activities. It rearranges the procedures necessary to alter a firm's business logic or value-generating process (Vendraminelli et al., 2022). Additionally, digital transformation leverages digital technology to facilitate cross-border interactions with suppliers, consumers, and rivals. As a result, digital technology may help organizations gain a competitive advantage by allowing them to either transition using their current core competencies or generate new ones (Siemens Digital, 2021). Furthermore, digital transformation necessitates involving a bigger scope than technology and processes; it involves the transformation and change in culture and behavior of leadership and employees in an organization. People are more important than technology and are the key to the success of this digital change (Zeshan et al., 2021). For example, digital transformation in the healthcare industry is expressed by widespread and extensive use of information technology, which profoundly

alters the delivery of healthcare services. IT changes how businesses work, what they do, and what they can do. This lets healthcare providers enter new markets or leave old ones (Siemens Digital, 2021).

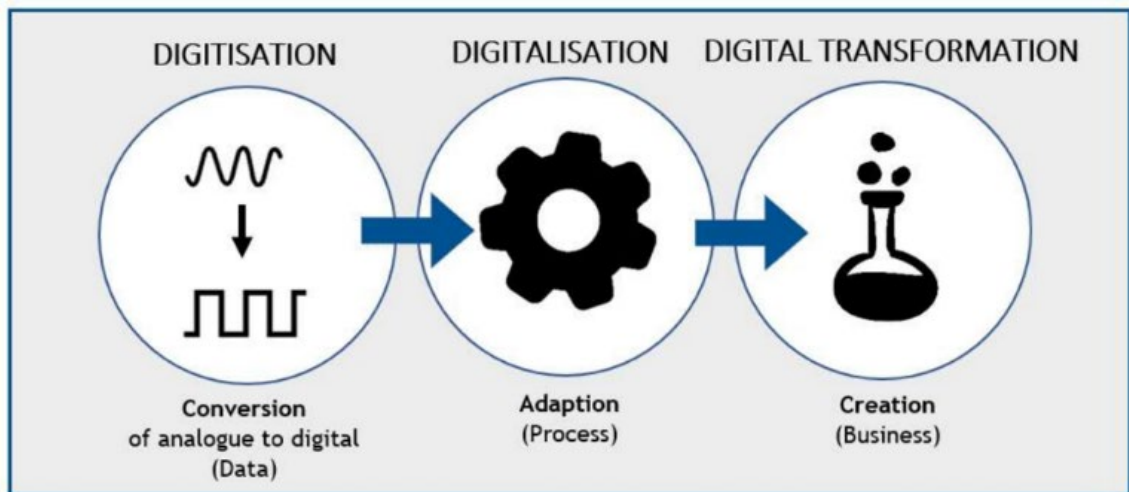


Figure 4: Digital Transformation Journey (Maltaverne, 2017)

Finally, (Maltaverne, 2017) also agrees that the journey of digital transformation includes three phases, and he summarizes them as follows: Digitization is the phase in which the conversion of analog data takes place (Data Conversion Phase). The second phase is digitalization, which is the adoption phase (process conversion from manual to automation). The last step is the creation phase of digital transformation. This is where businesses change and new competitive advantages are made.

2.4 Digital Transformation Strategy

A digital transformation strategy is a road map or a blueprint that assists organizations in managing the transformations that occur due to the integration of digital technology and the organization's post-transformation operations (Vial, 2019). To plan and adapt to digital transformation successfully, organizations must have a clear strategy and prioritize "digital" in their business plans (Zoppelletto et al., 2020). According to Bumann and Peter (2019), digital transformation is motivated by strategy more than technology. As a result, various studies of success stories indicate that organizations with clear and defensible digital transformation strategies are having successful implementations and gaining the values they planned. All studies agree that organizations must have a separate plan for digital transformation that complements the corporate and functional strategies. Such a comprehensive plan will aid organizations on their digital transformation journey, serving as a unifying idea for coordinating, prioritizing, and implementing all digital transformation projects. As a result, Bumann & Peter (2019) advise that digital transformation be positioned at the level of corporate strategy. Other researchers disagree with this method and support the traditional alignment approaches that information technology strategy is a secondary functional strategy that must be linked with the business strategy of the organization (Bharadwaj et al., 2013; Chan & Reich, 2007).

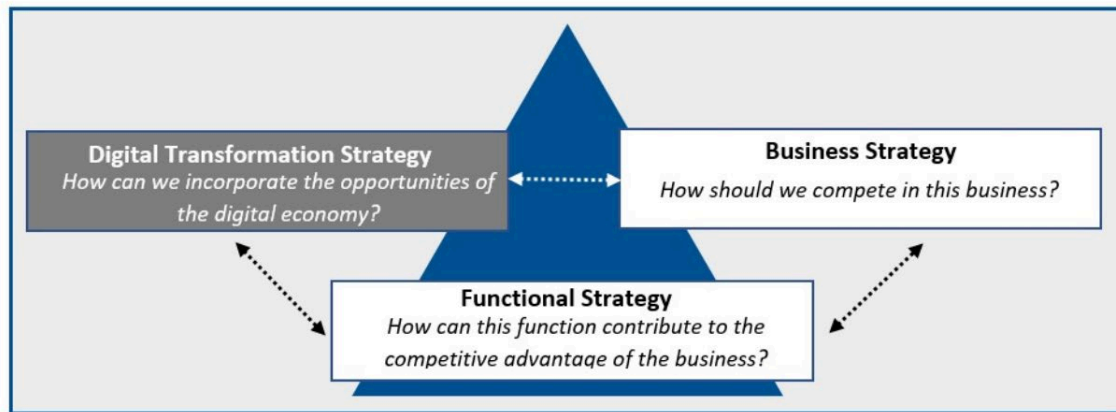


Figure 5: Positioning of Digital Transformation Strategy (Bumann & Peter, 2019)

Based on the review of several papers, they all agree that the basis of digital transformation strategy, or some who call it "framework," includes four main pillars: 1-Digital Resources Organization Structures and Executive Team, 3-Build the Digital Culture, and 4-Pick the right technology. 5-Invest in the employees, 6-Monitor and enhance (Verhoef et al., 2021; Zoppelletto et al., 2020; Uniserve, 2021).

2.4.1 Digital transformation Resources

An organization's resources usually refer to the physical and intellectual properties that include its capital, human resources, and assets. However, in order to achieve digital transformation, a business's reinvention of how it generates and distributes value to consumers frequently necessitates access to, acquisition of, or development of new digital assets and capabilities (Verhoef et al., 2021). Digital resources are the use of the most important digital assets and skills needed for the digital transition. These include digital assets, digital agility, and the ability to analyze big data.

Digital assets are all about tangible and intangible digital assets that are essential to compete effectively in the digital era, such as data storage, information management, and communication infrastructure software and

hardware (Leonhardt et al., 2017). For example, organizations can use big data (such as data about a customer's journey) as a digital asset by using their skills in data analytics to customize their services and products (Slawsky, 2010).

Digital agility refers to the capacity to detect and capitalize on market possibilities created by digital technology (Foutty, 2021). It encourages the recombination and development of new goods, services, and business models that maximize the value provided to the client by continually perceiving and capturing market possibilities (Burchardt & Maisch, 2019). This competence becomes increasingly critical as a business advances through the stages of digital transformation, from digitization to digitalization and from digitalization to digital transformation. To survive in the digital age and achieve digital transformation, the organization must be adaptable in adapting to the required digital technologies that meet the ever-changing customer needs for adaptability and continuously (Mangalaraj et al., 2022), modifying and reconfiguring current digital assets and capabilities; this will necessitate a change in organizational structure, which will be defined in the following section (Leonhardt et al., 2017), and finally combining

Big data analytics capability refers to the organization's capability to gather and analyze large amounts of data for decision-making (Dremel et al., 2018). Most organizations struggle to build this *capability*, although the collection of big data is very simple (Daniel et al., 2020).

2.4.2 Digital transformation Organization Structure

Organizational structure changes are one of the critical strategies to adapt to digital transformation. Sklyar et al. (2019) believe that digital transformation has consequences for organizational structure, advocating a flexible structure

consisting of distinct business units, agile organizational forms, and digital functional areas. For an organization to have success with a digital transformation strategy and an innovative organization, it needs to cut down on the bureaucracy and break the centralized management (Slawsky, 2010). It requires adaptable organizational structures that enable rapid reaction to continual digital change. Foutty (2021) also concludes that to achieve an agile organizational structure, the organization must invest in leadership, mindset, talent, business partners, and innovation.

The digital function area is considered an important aspect for organizational structure strategy. It is the reliance of information technology and tools to change a whole line of functions or business operations (Verhoef et al., 2021). Most importantly, the IT function must change from one that is reactive and focused on coordinating communication or data flows to one that is more proactive and focused on coordinating digital value creation through quick and exploratory responses (Leonhardt et al., 2017).

2.4.3 Build the Digital Culture

Digital Culture is the organization's ability to develop the competencies necessary to transform their value using digital platforms and cooperate with their employees in the journey of adapting to innovation and the organization's digital transformation strategy (Vial, 2019). As simple as it sounds, most organizations fail to launch their digital transformation strategy due to the nonexistence of digital culture and the resistance of their employees or customers (Sood, 2018). A digital culture must be embraced from the top down, starting with government and senior leaders, which will empower employees to embrace the digital culture and deliver results faster (Warner & Wäger, 2019). Furthermore, in order to embrace a digital culture among the employees, the organization must first

promote delegation over control and decentralize decision making throughout the organization (BCG, 2022). Also, organizations should encourage their employees to take risks rather than be cautious, fail, and learn. In addition, transparency and interactivity are fundamental to a digital culture's existence (Gobble, 2018).

2.4.4 Pick the Right Technology

Technology is an important dimension of a digital transformation strategy since it defines how an organization will approach the utilization of new digital technologies (Uniserve, 2021). The organization must examine their existing information technology infrastructure and their processes (Burchardt & Maisch, 2019), then make the necessary adjustments considering impending changes (Warner & Wäger, 2019). Based on (Monsallier, 2021) conclusion, it is not necessary to adapt to the best technology in the market. It is all about studying and implementing the right technology that will deliver the organization's needs and goal to transform digitally, whether this technology is adapting to the internet of things, mobile applications, or cloud-based systems of artificial intelligence (Burchardt & Maisch, 2019). The organization can implement the best technology for digital transformation by first shortlisting the technologies based on the feedback of the competitor's experience or feedback of an organization from the same field (Monsallier, 2021). Second, create selection criteria that fit the organization's needs, not the industry's requirements (Gobble, 2018). Third, consider the technology that provides the balance between current needs, the solution's coverage, and future opportunities for scalability (Uniserve, 2021). Then, show them how the technology works. Before you invest in new technology, make sure it fits with the organization's goals and fills a hole in your business (Gobble, 2018).

2.4.5 Invest in the Employees

Usually, when an organization plans to adapt to digital transformation, the first thing they do is to utilize and hire a service from an external consultant, who in return proposes a general one-size-fits-all solution **or** best practices (Tabrizi et al., 2019). On the other hand, (Gobble, 2018) supports that the organization must invest in their own employees and leaders to lead this change in the first place. Employees who have first-hand knowledge of what works and what does not in their daily operations should then work with the consultants.

A mature digital organization is the one that invests in its employees' digital skills and capabilities and obtains their buy-in to execute the organization's digital strategy. During the early stages of digital maturity, many businesses don't have this skill (Cetindamar Kozanoglu and Abedin, 2020).

The formation of agile teams is critical to attaining the organization's goals of digital transformation (Varshney, 2020). Therefore, department or team leaders who are responsible for digital transformation implementation should ensure that employees feel secure throughout times of transition, make them involved throughout the process, and provide all the required skill development to do the job and then enhance it (Uniserve, 2021). The organization should choose the proper team to lead the change and be eager to learn and achieve the organization's digital goal. Since digital transformation is an ongoing process, your business needs experts to make sure everything stays on track (Foerster-Metz et al., 2018).

2.4.6 Digital transformation Monitoring and enhancement

Monitoring the digital transformation progress and results is a very crucial phase of the digital transformation strategy (Matt et al., 2015), where it involves the continuous monitoring of the digital transformation strategy and across its

action files (culture, technology, employees, organization and customer experience (Foerster-Metz et al., 2018). This organization must clearly define the digital transformation key performance indicators (KPIs) and measure its performance. This will allow learning and fine-tuning of the business model as required (Zoppelletto et al., 2020).

2.5 Digital Transformation Strategy in Kingdom of Bahrain

Bahrain's government is one of the leading countries when it comes to adapting and deploying innovative technology to benefit businesses, citizens, and residences (Bahrain.bh, 2021). Bahrain started the digital transformation strategy back in 2007 (Bahrain.bh, 2021), as part of the national economic vision 2030 and as a major objective under the National eGovernment Strategy 2007-2010, and since then it has been aggressively pursuing ways to accelerate digital transformation in the public sector. That shall fulfill Bahrain's Economic Vision 2030 (EDB Bahrain, 2019).

Bahrain Digital Strategy is led, defined, and closely monitored by senior leaders, led by H.R.H Prince Salman bin Hamad Al-Khalifa, and supported by the National ICT Governance Committee (ICTGC) (Bahrain.bh, 2021), which is in charge of monitoring the coordination and implementation of strategic digital initiatives throughout the Kingdom. Having a vision from senior leaders is considered one of the success factors of Bahrain's digital transformation. In addition to the people, it was driven by "Team Bahrain" and the technology used (all Bahrain employees and citizens contribute) (EDB Bahrain, 2019). After 10 years of great progress, by 2021, Bahrain will focus on transformation in many sectors, including ICT, Financial Services, Transport, Manufacturing and logistics, Tourism and retail, Real Estate, Healthcare, and finally the Education sector, which we will explore more in this research (EDB Bahrain, 2019). The COVID-19 pandemic has forced governments to make use of current and

developing technologies, enabling the government to expand the reach of its national digital transformation strategy and electronic services while also proving its preparedness to deal with conventional catastrophes and pandemics (EDB Bahrain, 2019). Its aim is to ensure service continuity and to enhance its infrastructure and security to support initiatives such as Work from Home, e-Banking, e-Learning, and e-Health and to introduce what they call the new normal (Ho et al., 2020).

2.6 Influence of Digital Transformation on Employee Behavior and its Consequences During COVID-19 The Pandemic

This research will focus and highlight the attitude of employees in the education sector and examine their views on the role of government strategies, leadership, the concept of working from home, the level of digital literacy, and how open and agile employees are in the adaption of digital transformation during COVID-19, the pandemic.

2.6.1 Influence of Digital Transformation Adaption by Government on Employee Behavior.

The COVID-19 pandemic caused real health issues around the world, which caused school closures to slow down the pandemic. This leads the government to implement a range of measures and use digital transformation to control the educational impact of the pandemic and restructure their educational institutions to give education remotely (Gouédard et al., 2022). Some government plans for getting schools open again focus on certain groups of students and teachers, grade levels, or days of the week, or they set up schedules for teachers to go to school on a rotating basis (Pfister, 2020).

According to a study of 19 teachers at private universities in Uttarakhand, India, government regulation and enforcement of online learning, in particular, and digital transformation in general introduced major barriers (Joshi et al., 2020). The barriers include 1-home environment settings (lack of basic amenities, external distraction, and family interruption during teaching and completing assessments). 2-Capacity building barriers as the faculty has to follow the government instructions and implement them immediately without any prior training, technical support, or a lack of clarity and direction. 3-Technical issues where teachers had to deal with technical assistance, a lack of technical infrastructure, a lack of knowledge of online teaching platforms, and security concerns. All of the above barriers cause employees to act in different ways. Most of the time, they show a negative attitude, a lack of enthusiasm, or both (Joshi et al., 2020).

Similarly, a study on 100 university lecturers at a private university in West Jakarta (Karjo et al., 2021) shows that governed enforcement of changing work-from-home schedules introduces access challenges, especially since digital tools must be used to fulfill this strategy. The study indicates that in comparison to their counterparts at private schools, government school teachers are not entirely digitally equipped (figure 6 and figure 7), and this supports the study done by Joshi et al., 2020.

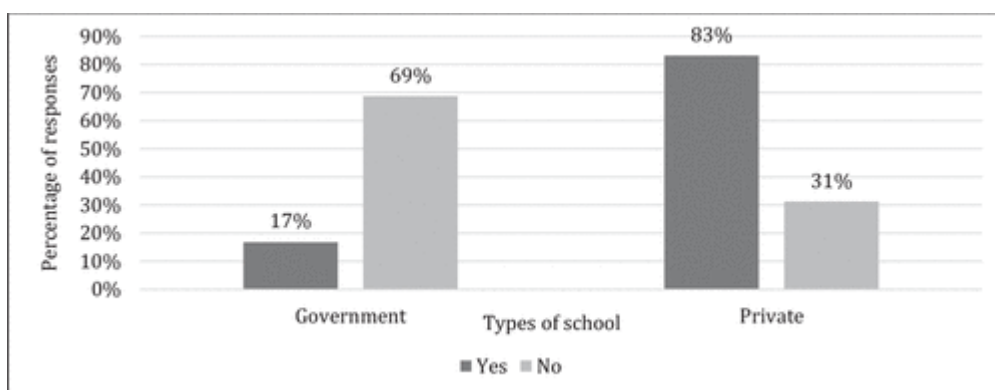


Figure 6: Whether Schools Already Had the Supporting Infrastructure for Online Classes

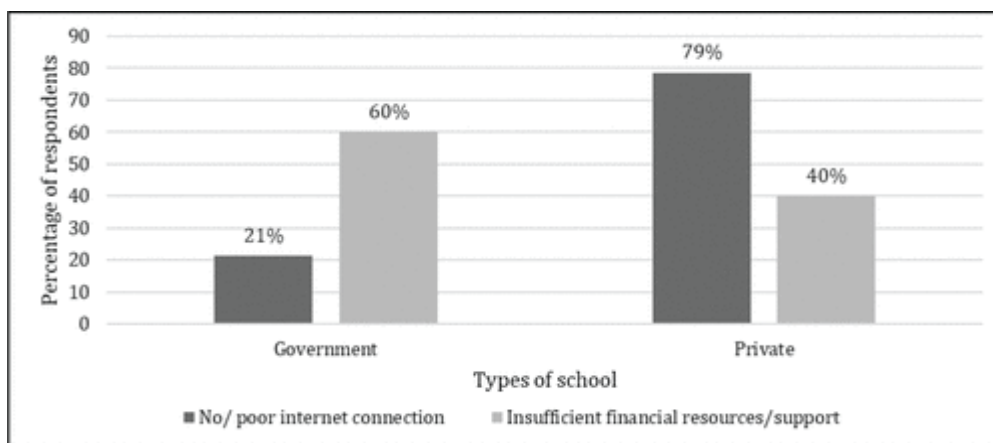


Figure 7: Access Gap Among Teachers

Many researchers conclude that government change and structural transformation cause a conflict in teachers' behaviors, efficacy, and level of commitment as a result of introducing digital changes, increased accountability, or testing (Lloyd, 2018). Teachers, according to Arora & Srinivasan, 2020, negatively rebuilt themselves and their teaching in accordance with the imposed discourses of teacher hood and quality. Others were nervous, and some teachers rebelled against the accountability standards that they thought were the most at odds with how they taught (Kamal & Illiyan, 2021).

Furthermore, a study performed on a set of teachers in a focus group in Malta from different schools shows the positive and negative impact of government enforcement on digital learning. Teachers showed an initial sense of loss, unpreparedness, and routine disturbances when they were forced to use exclusively digital means. Therefore, their performance and quality were reduced. On the positive side, the teachers found it as a new opportunity to learn about the use of digital technology in lesson studies and used it post-pandemic as the new normal (Calleja & Camilleri, 2021).

On the other hand, a positive study on Maldives teachers' behavior, in response to government enforcement of online teaching, showed positive agility and openness by teachers (Nishan & Mohamed, 2021). The study concluded that teachers were fully trained for all digital transformation tools and online learning following the government policy changes, which led to their enhancing their knowledge of digital transformation (Nishan & Mohamed, 2021). As a result, teachers were more dedicated to teaching during the worst parts of the pandemic, and they were fully involved (Nishan & Mohamed, 2021).

Kamal & Illiyan's (2021) finding also shows positive behavior by government teachers where teachers believe that imposing digital transformation policies and virtual education is a good idea for closing the learning gap and molding students' futures throughout the crisis, according to COVID-19. Still, they had problems with online education, such as problems with technology and problems with online tests and assessments.

2.6.2 Influence of Leadership Effectiveness on Employee Behavior.

Leadership in the digital age has never been more critical. It is the key to a successful organization's digital change. Organizations require leaders' talent and vision to inspire their employees and manage their digital operations in order to stay up with the rapid pace of change (Katanic, 2022). A new leadership culture is required in the era of the digital revolution (Al-Mahdy et al., 2016). Actually, adapting to digital transformation demands a strong focus on the employees and what methods are to be implemented by the management in order to inspire and encourage them to achieve the digital goal positively (Iskamto, 2020). In addition, managers should keep in mind the risk of resistance and the steps to overcome these challenges (Schwarzmüller et al., 2018).

Leaders should impose a degree of influence on employees and demonstrate their capacity to implement a strategy that benefits the digital transformation process. However, the failure of digital transformation might occur once the method or style of leadership does not align with the organization's strategy, which has a strong negative impact on achieving the organization's goal and having the engagement of its employees (Sow & Aborbie, 2018). According to Gobble (2018), the digital involvement of employees is led from the top, and it can be considered a mature organization. Employees in this type of environment usually have strong confidence in their leaders and their methods to achieve digital transformation successfully. On the other hand, they disagree with this Bartsch et al. (2020). Instead of making decisions and getting things done from the top down, they think leaders should clear the way for their employees.

2.6.2.1 Characteristics of Digital transformation leaders

Digital transformation leaders in an organization should have specific characteristics.

It inspires others: Leaders in the digital space have the potential to keep their employees connected and interested. They unify their organization behind a bold, unambiguous goal and course (Schwarz Müller et al., 2018).

Provide a sense of security to the employees: It is critical to build trustworthy business principles and a corporate culture that fosters trust and a sense of security. This is one of the primary responsibilities of digital leadership, as it contributes to the creation of an atmosphere that fosters emotional bonds between team members and provides them with a shared purpose to strive for, while also allowing for personal growth and fulfillment (Schwarz Müller et al., 2018).

Leverages technology: Effective digital leaders are early adopters of digital technologies. Adopting digital technologies necessitates that executive comprehend and recognize the ramifications of technology in the larger corporate environment (Antonopoulou et al., 2021). Because of the constant nature of technological changes, they are capable of leading new technologies while also keeping track of innovation (Katanić, 2022).

2.6.2.2 Digital Transformation Leadership Style

Servant leadership refers to the style and concept of leadership in which an individual engages with others in order to attain authority rather than power. (Al-Mahdy et al., 2016).

Situational leadership refers to a leadership style in which leaders consider the level of preparation and employees' readiness for digitalization and the uniqueness of each circumstance (Lalani et al., 2021).

Distributed leadership entails applying leadership skills at all levels of the school to increase opportunities for change and strengthen the capacity for progress. In summary, it is 'expertise-based leadership' rather than 'role-based leadership' or 'years of experience-based leadership' (Liu, 2020).

2.6.2.3 Positive Impact of Leadership in Digital Transformation on Employee Behavior

Digital transformation in the education sector does not only need new technologies and capacities but also new forms of management, leadership, organizational structures, service designs, and redesigned labor processes (Al-Mahdy et al., 2016). As a result, almost all workers at all organizational levels must change their work methods and thereby participate in planning, creating, and executing changes. Pinck & Sonnentag (2017) argue that very few organizations are aware of the technique for mindset change within the organization: what are employees' roles, responsibilities, and communication habits evolving as a result of the organization's growing digitalization?

Employee engagement is a performance method that aims to guarantee that employees are committed to the organization's mission and values and to drive them to contribute to the organization's success (Iskamto, 2020). According to recent research, the education sector suffers from many challenges, including an urgent need for successful leadership progression, which is critical to the smooth functioning and eventual achievement of an organization's long-term objectives (Antonopoulou et al., 2021).

The findings indicate that digital transformation has a statistically significant beneficial influence on employee performance and engagement at work. Change leadership has a beneficial effect on the influence of AI, in particular, on employee performance and engagement at work. Wijayati et al., (2022) and Rangus & erne (2017) concluded that leadership had a sizable impact on employee engagement, which in turn had a sizable impact on real performance. They noted that leaders should be fully engaged with their teams and proactively determine the cause of the absence of full engagement, attempting to eradicate the reason and implementing behavioral tactics that allow full engagement. Winasis et al. (2021) agree that the atmosphere established by leaders who practice organizational change or digital transformation, in

particular, has a considerable positive influence on employee behavior. In addition, (Wildan et al., 2020) argue that the level of employee engagement and positive behavior will be at its highest if management allows the employees to express themselves physically, emotionally, and intellectually; in addition, provides them with job security; and that digital transformation is not a replacement for them. According to (Al-Mahdy et al., 2016), leaders have a direct impact on employee engagement by demonstrating care for their employees' ideas and enhancements in digital tools, enabling them to interact openly and express their views, and recognizing individuals for a job well done. Liu (2020) study on Chinese primary schools to motivate teachers for digital change shows that a distrusted leadership style has a direct influence on an employee's behavior towards digital transformation. Leadership characteristics such as responsibility and accountability, collaboration and cooperation, and values and beliefs, had a substantial influence on the employee's performance (Sol, 2021). It is also agreed that if distrusted leadership is allocated effectively among school employees, it has the potential to improve their performance and adaption to changes (Sol, 2021).

2.6.3 Influence of Employee Digital Literacy on their Behavior towards Digital Transformation.

In the digital era, the right skills and knowledge are critical for an employee's productivity, innovation, and growth as well as that of an organization. They provide employees with a competitive edge while increasing their total value to the business. On the other hand, a shortage of skills can have a detrimental effect on employee engagement and, consequently, retention (Cetindamar Kozanoglu & Abedin, 2020).

Organizations are fully aware of the importance of employees' skill development, especially in digital skills. Based on a study conducted by (Gautam, 2018) it was discovered that 67% of employers are concerned about developing skills gaps and over (55%) reported a negative impact on their business as a result of lengthy employment vacancies, which result in decreased productivity and increased voluntary turnover. This demonstrates that upskilling people by pushing them to pursue new skill sets and enhance their digital literacy is the key to keeping employees, assisting them in their growth, and ultimately assuring the company's future success (Cetindamar et al., 2021).

Digital literacy refers to the employees' abilities, attitudes, and knowledge associated with the use of technology for communication, education, and employment. An employee with digital knowledge must be capable of efficiently utilizing digital technology in accordance with his or her competencies and requirements (Tuamsuk & Subramaniam, 2017). In the education sector, it is critical that the online environment provides teachers with a sense of security as they work on their lectures. Particularly when it comes to selecting digital materials and online tools that are important to them and their students, rather than just adhering to a set path. In other words, it is critical for instructors to increase their digital literacy (Korisztek, 2021). Human-machine contact is much

different from the human-to-human interaction that is emphasized in communicative language schools (Tuamsuk & Subramaniam, 2017).

There are three levels of digital literacy (EROL & AYDIN, 2021). At the first level, digital competence, which covers employees' abilities and attitudes, may be considered as the founding components of digital literacy (Education, 2022). Level two is digital usage, which refers to the applications of digital competencies in real-world situations, utilizing digital tools to seek, find, and process information (Education, 2022). The third level is digital transformation. It occurs when digital capabilities (level one) are used in professional/disciplinary level two contexts, enabling individual and organizational transformation, innovation, and creativity (EROL & AYDIN, 2021). As shown in Figure 8,

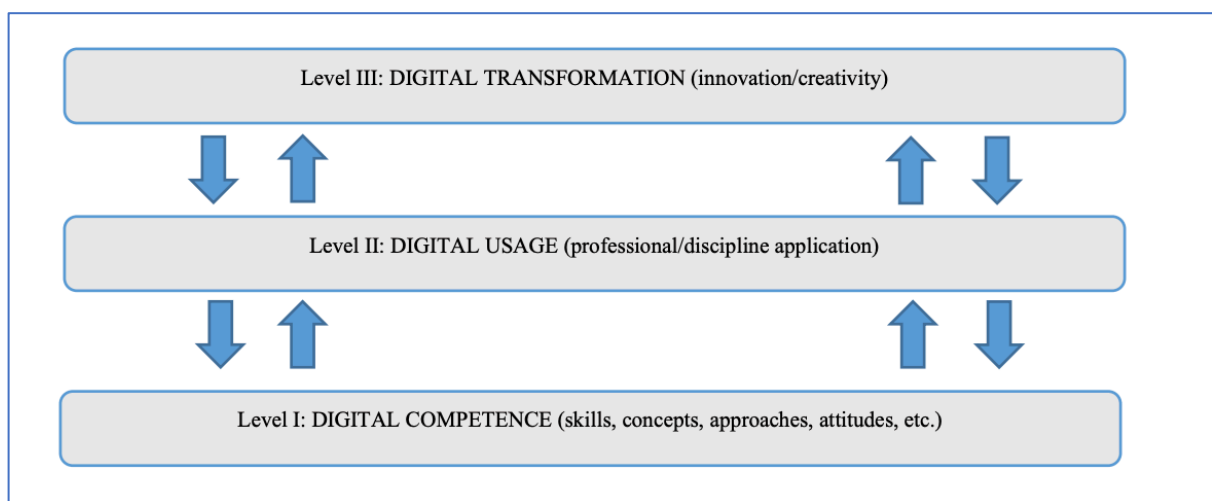


Figure 8: Levels of Digital Literacy (EROL & AYDIN, 2021)

Many studies show both negative and positive relationships between digital literacy and employee capacity development on employees' behavior and engagement in a digital organization. A study conducted by (Chan et al., 2021) on 256 samples concludes a strong relationship between employee engagement and digital literacies. The study shows that digital literacies act as a moderator in

the link between workplace digitization and employee engagement as well as the association between creative culture and employee engagement.

Other studies also performed on three types of digital literacy (technology, organizational context, and environmental context) and its impact on employee behavior and performance indicate that there is a favorable association between digital literacy and employee performance in technical, organizational, and environmental contexts (Mohd Abas et al., 2019). It is believed that a strong technological and organizational basis is required to promote employee digital literacy. For future research, this industry's managers should be prepared to embrace digital literacy (Cetindamar et al., 2021).

Due to the COVID-19 pandemic, the globe has seen a shift in professional teacher responsibilities from the physical presence and face-to-face teaching (Sales et al., 2020). The situation led schools to immediate activation of digital transformation and, therefore, online teaching and digital education methods for all students' levels. Teachers were more instrumental in monitoring students learning impacts, and their psychological or technological difficulties manifested themselves in online teaching platforms (Almazova et al., 2020).

Numerous studies (Hussein et al., 2020; Almazova et al., 2020; Kraft et al., 2021) demonstrated that teacher satisfaction levels decreased and that they soon reached emotional fatigue. This resulted in low knowledge, or the skill required by them to learn in a very short time in order to deliver a successful teaching method to students. Although hybrid teaching methods (physical and distance) now have the potential to increase teacher stress, which has been shown to be strongly associated with changes (Collie, 2021). Other studies also agree that due to all the new digital methods and new skills to learn in a short period of time, teachers have an overwhelming sense of failure and sadness, which impacts the quality of education delivery (Hussein et al., 2020).

Teachers should have a sufficient level of digital literacy in order to satisfy the future demands of the innovative educational model. Additionally, the study demonstrates a substantial correlation between teachers' digital literacy level, job happiness, and professional position (Li & Yu, 2022). To compensate for students' learning loss and recovery during the closure period, teachers needed to prepare for deeper technological approach to teaching. From in-person to online instruction, high-achieving educational institutions rely on enhanced teacher professional roles during the COVID-19 pandemic and in the future hybrid classroom (brosimova, 2020).

The study discovered that teachers were given more responsibilities during the online teaching process without any or limited prior training. Besides the transformation in the educational environment, it has become critical to improve teachers' digital literacy during a pandemic (Korisztek, 2021).

Due to the online teaching and learning structure, many teachers at many levels were eager to enhance their digital skills in a short period of time and were forced to adjust to online education. Teachers found and realized the importance of digital competencies and how they have become a prerequisite for schooling (Fu & Clarke, 2021; moedu, 2020). Likewise, a mathematics teacher called "Lubaba Dakkak" expressed her satisfaction with the effort made by the Ministry of Education in the Kingdom of Bahrain (moedu, 2020). She added that the ministry was able to maintain the sustainability of education and learning and take care of the teacher's digital training by providing them with modern technological means in teaching, providing the required means in schools, and continuous motivation and encouragement (moedu, 2020). In addition, recently, 14 female teachers from Yathrib Preparatory School for Girls obtained the Certificate of Expert Microsoft Educator in Digital Education (MCE) from Microsoft International (BNA, 2022). The 14 teachers express their satisfaction with the care provided by the Ministry of Education, which contributed to

enhancing their digital literacy and investing in developing the digital skills to help them overcome the conditions of the Corona virus (moedu, 2020).

Another study was also performed on 188 Turkish teachers to measure the impact of digital transformation and their level of digital literacy on their performance. The study showed that even though Turkish teachers have a high level of digital literacy, however, it varies significantly by age, years of service in the profession, level of technology usage, and use of distance education platforms (EROL & AYDIN, 2021). The study also concluded that those teachers with high digital literacy are more engaged in the digital transformation methods and more effective in the use of distant education platforms and social media. In contrast, those teachers with a longer service period and higher age, their digital literacy is lower and therefore their participation is lower.

At the same time, another study was conducted to examine the perspectives of Turkish language instructors on distance education and digital literacy in Turkey. The study revealed that the average population is young and still the pandemic has a significant influence (Aydin & Erol, 2021). Teachers were uncomfortable with the digital platforms and how it takes time to familiarize themselves with them before delivering the online session to students. Based on these findings, it was advised that multimedia materials be designed in a bidirectional manner to facilitate inter-institutional collaboration in resolving digital challenges (Ata & Yldrm, 2019).

The same study performed in India, which aims to find the issue of digital literacy faced by secondary school teachers during COVID-19, discovered that the majority of teachers have the basic knowledge of digital technology and are capable of using computer hardware equipment. Most of them have trouble using online learning and need training. They also have trouble giving teachers the right computers and internet plans and setting up the right infrastructure for digital learning (Marsh, 2018).

The Sarwar et al. (2015) study, which was performed in the education sector, showed that employees with digital experience and high literacy during COVID-19 had major employment productivity, job performance, job satisfaction, and organizational commitment. It was found that relying only on technology won't get the results that were wanted. Instead, businesses need to find a balance between helping employees build their skills and helping managers.

The study shows teachers indicate several ways they seek to overcome obstacles in preparing course material and assignments for online classes. Most people are very happy with the digital training they get at work; others get help from coworkers, family, or students (Calleja & Camilleri, 2021).

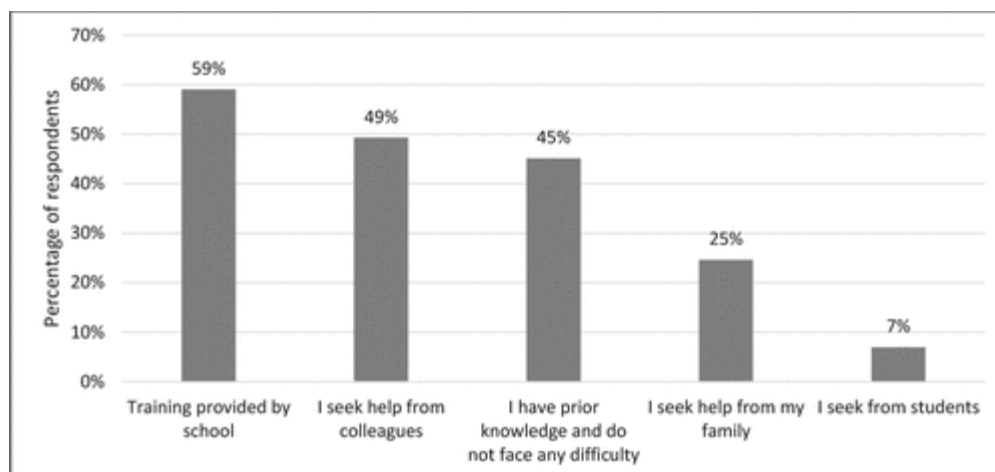


Figure 9: Ways to Manage the Challenges of Online Teaching

According to data by Calleja & Camilleri (2021), school teachers consider themselves to be digitally aware. It should be stressed, however, that being able to use technology does not imply possessing the necessary educational skills to teach online. As a result of the government's push for digital transformation, teachers don't have enough digital training, don't have enough experience with online learning, and don't know how to use digital tools. This has hurt the quality of their teaching.

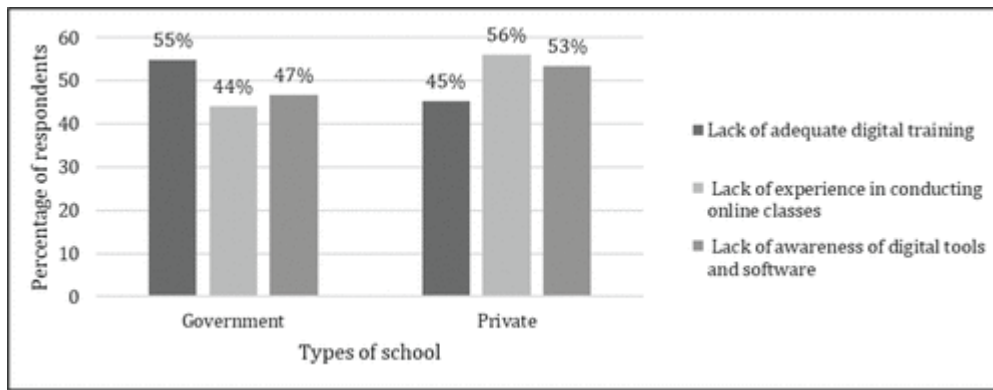


Figure 10: Digital Skills Gap Among Teachers

Finally, teaching communities expressed an urgent need to develop digital skills for data collection, digital content development, communication, and cooperation. Nonetheless, teacher feedback practices were preferred to help students develop their feedback literacy (Wood, 2021). However, teachers' digital abilities were lacking and needed to be increased, particularly in the creation of digital materials, QR codes, and programs for software and app modification. Many teachers struggled due to the lack of digital knowledge, which impacted their quality of teaching the students and even caused low employee performance (Brosimova, 2020; Ahn & Chen, 2021; Nuzzaci, 2016).

2.6.4 Influence of Work from Home Concept on Employee Behavior.

The constant change caused and brought by digital transformation is introducing significant influence on employees on a variety of levels, whether management or normal employees. This impact includes an employee's turnover, knowledge, performance, or even productivity, and skill set (Foerster-Metz et al., 2018). On the other hand, the rapid global spread of the COVID-19 virus has resulted in a serious global collapse and process change (Bogdandy et al., 2020). The government's strict control methods resulted in several uncomfortable

working conditions. Traditional modes of operation face significant obstacles. COVID-19 had an impact on employees and their organizations, specifically the education and healthcare sectors (Collie, 2021). As a result, the government and many organizations have headed for flexible work methods, such as working from home or hybrid working, in order to mitigate the loss of educational processes (Ahlstrom & Wang, 2020). The pandemic introduced the concept of working from home or remote working, which was a challenging experience for many, particularly teachers. Since their work nature is face-to-face interactive sessions with students in the classroom, introducing virtual teaching was overwhelming and challenging as teachers were experiencing it for the first time (innerdrive, 2022).

Working from home compared to traditional office models puts pressure on employees to develop new online office abilities, virtual work communication skills, and learn and obey new policies and regulations to protect data and leakages (Ho et al., 2020). Additionally, this also introduces the importance of adapting to a new working environment by employees like the internet, as well as the importance of training and strengthening employees' work from home abilities (Ahlstrom & Wang, 2020).

In the education sector, distance education was enforced on teachers and education faculties, which allows for greater flexibility in the learning environment and is a critical type of education that complements face-to-face instruction (UAE, 2021). However, during the unforeseen COVID-19 pandemic, the distant education imitative was used as a temporary substitute for traditional teaching, and various difficulties were encountered (Ata & Yıldırım, 2019). Digital transformation in education and, in particular, online learning allows employees to work from home, which has impacted how people, particularly workers, behave (White, 2018).

While teachers and students were underprepared, and there were challenges with the availability of energy, steady Wi-Fi, and equipment, the majority of nations were able to provide students with access to learning through a combination of distance education and online learning. The benefits included increased comfort with technology use and a revaluation of the significance of social relationships in (Ho et al., 2020).

Due to the flexibility of working from home, it can boost performance. Employees have the freedom to choose when and where they work whenever possible. Numerous employees express satisfaction with the work from home model's flexibility. Additionally, working from home can boost performance since there are fewer distractions, employees take fewer breaks, and there is no contact with coworkers (Garg & van der Rijst, 2015).

Chen (2021) agrees with the previous study that working from home lacks face-to-face connection with coworkers, and when job-related issues develop, it's difficult to resolve them instantly through online virtual communication. The use of online networks to resolve issues results in a rise in psychological stress and anxiety among teachers and facilities. Chen (2021) explained that working from home results in the violation of family members' space. During the pandemic, teachers and facilities are increasingly utilizing family space for their own professional purposes, which creates a contradiction between work and family life. Work-family balance could hurt workplace productivity, so people who work in human resources need to figure out how to deal with this problem. positive and negative influence of working from home on employees' behavior during the pandemic:

A study carried out for 20 physical teachers on their perception of distance education concluded that, on one hand, the lack of training on digital platforms and the lack of a clear process on how to work from home was a real issue. They added that they struggle to keep up with technology and it was observed that the majority of teachers felt insufficient (Kaya, 2021).

A study was conducted by (Joshi et al., 2020) on government and private university teachers in Uttarakhand, India to identify the issues faced by teachers during distance education and assessment. The research identified four distinct types of obstacles encountered by teachers, which led to their unhappiness and decrees in performance due to working from home. The first concern is the home environment, which lacks basic facilities, external distractions, and family interruptions when teaching and conducting evaluations. Second, barriers to institutional support, such as a lack of funding for modern technologies (laptop and internet speed and billing), a lack of training, a lack of technical assistance, and a lack of clarity and direction. Third, teachers' technological issues, a lack of understanding of online teaching platforms, and worries about security (Joshi et al., 2020). Finally, teachers' personal issues, such as a lack of technical expertise, a negative attitude, difficulty integrating technology into their courses, and a lack of desire

Teachers discuss the difficulties and issues they face while working from home. The biggest concern is the increase in working hours and the mixing up of professional and personal life. The second main concern is the loneliness and inability to control the students in online classes. On the other hand, the teacher's privacy is gone, and the pressure is increasing as parents and school administrators now have an unfair edge in monitoring teachers' classroom activities because of online classes. Teachers have stated that family members occasionally log into the virtual classroom to see what the teachers look like (Patra et al., 2021).

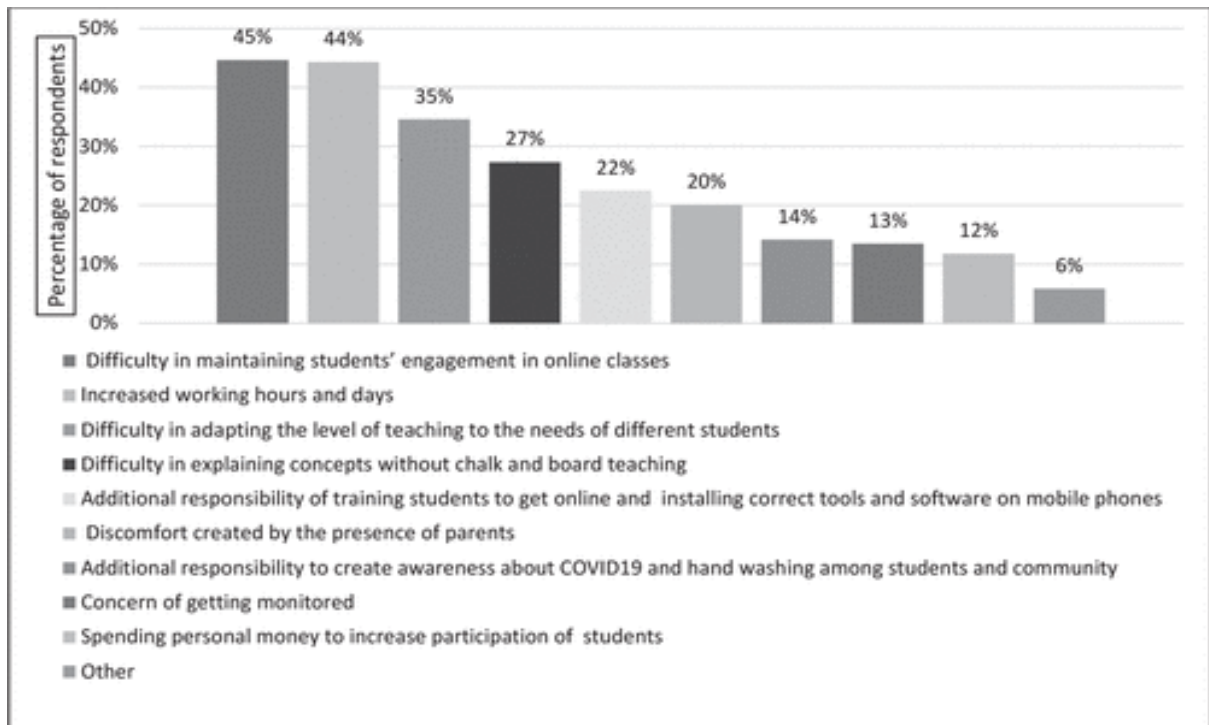


Figure 11:Effect of Lockdown on Teachers Behaviors

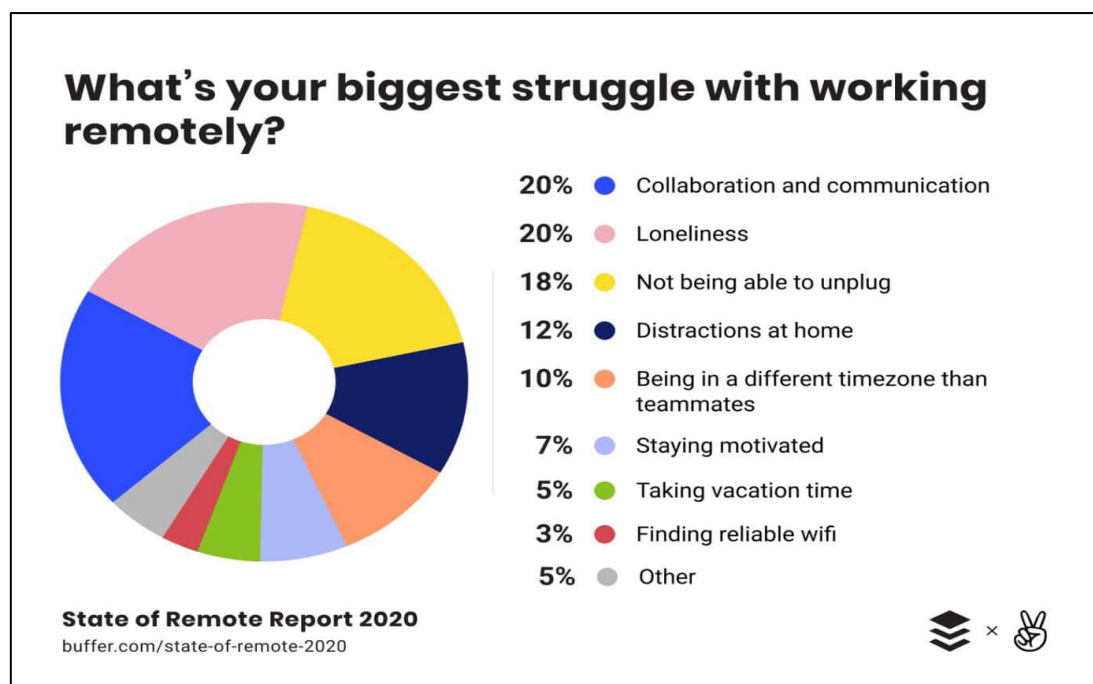


Figure 12: Teachers Struggles working from home (RAMCHANDANI, 2022)

2.7 Synthesis of Literature

Based on the above literature, which covers four main factors of how digital transformation affected employee behavior during the COVID-19 pandemic, here is the main summary and conclusion of the previous studies:

Government:

The external enforcement of immediate digital transformation implementation and changing of regulations during COVID-19 impacted mostly negatively on teachers' performance, engagement, satisfaction, and stability, especially with digital literacy or old employees (Gouédard et al., 2022). The main obstacles in online education include technological issues; difficulty with online tests and assessments; teachers' unfocused; and a mix-up of online and physical learning. However, there was a bright side to having a digital method as teachers showed positive behavior and believed that imposing a digital transformation policy and online education was a great opportunity to close the learning gap. It was real-time practice and real-time proof to move the school in a digital world (Nishan & Mohamed, 2021).

Leadership:

The environment established by leaders who practice organizational change or digital transformation in particular has a considerable positive influence on employee behavior (Wijayati et al., 2022; Rangus & erne, 2017). Moreover, the level of employee engagement and positive behavior will be at its highest if management allows the employees to express themselves physically, emotionally, and intellectually, in addition to providing them with job security and ensuring that digital transformation is not a replacement for them (Wildan et al., 2020).

Digital leadership has a positive impact on employee behavior during COVID-9, the pandemic (Winasis et al., 2021).

Working from Home:

Working from home has equally positive and negative impacts on employee performance, engagement, and satisfaction. Most teachers were unprepared technically and faced many obstacles to having the same quality of work as physical attendance. Some teachers said they were busier than they had been before the schools stopped. Teachers' personal and professional lives are mixed as a result of COVID-19 and the emergency shift to digital transformation and online learning. They are unable to concentrate and engage in both online and face-to-face learning while caring for their own children, homes, and other duties. On the other hand, many teachers find themselves happier and their production is at its peak due to the comfort of their home, and yes, they work more hours because they want to. Many teachers also like this concept even after COVID-19 (Gouëdard et al., 2022).

Digital Literacy:

Adopting digital transformation introduces a strong relationship between employee engagement and digital literacies. Where digital literacies act as a moderator in the link between organizational digitization and employee engagement, as well as the association between creative culture and employee engagement (Chan et al., 2021). Besides the transformation in the educational environment, it has become critical to improve teachers' digital literacy during and post pandemic. It was found that those teachers with high digital literacy are more engaged in the digital transformation methods and more effective in the use of distant education platforms and social media. In contrast, for those teachers with a longer service period and higher age, their digital literacy is lower, and therefore their participation is lower (Ata & Yıldırım, 2019).

2.8 Benefit from the Previous Studies

2.8.1 The Advantages of the digital transformation in education

1-Employee's resistance to change: Indeed, nearly 70% of people employed in the public sector think their digital abilities lag behind those in the private sector. Despite this, several key officials resist the next significant steps toward digital maturity. In short, individuals prefer to become familiar with their work and avoid stepping outside of their comfort zone, which results in delayed growth and development. Many educators fear failure and are resistant to adapting to new skills or techniques.

2-Accountability: digital transformation provided organizations in the education sector with new methods for tracking progress, enhancing transparency, and assuring service continuity are evolving (Broadbandcommission, 2020).

3-Capacity Building: Due to the online teaching and learning structure, teachers at many levels were eager to enhance their digital skills in a short period of time and were forced to adjust to online education. Teachers found and realized the importance of digital competencies and how they have become a prerequisite for schooling ((Fu & Clarke, 2021., moedu, 2020).

4-The work-from-home concept gave teachers more quality time with their families, which improved teacher teaching and performance quality. They work extra hours because they want to (Ahlstrom & Wang, 2020).

5-Government plays a great role in the adoption of the digital transformation. It was taking time to plan and implement business continuity prior to COVID-19. However, during the pandemic, the governments proved that crisis management is present, even though they were ad hoc decisions to recover the situation at early stages of the pandemic, but at later stages those decisions were more mature and that was reflected on each and every teacher's performance, quality of work, and satisfaction.

2.8.2 The challenges of the digital transformation in education

1-Although there is debate among researchers that digital transformation enhances the quality of education, many researchers also argue that it has a direct impact on reducing the quality of education. The COVID pandemic has also shown that education systems as a whole have major structural flaws, even in places where everyone has access to the internet and can learn online (Broadbandcommission, 2020).

Although working from home provides a number of advantages during the digital era and the pandemic, the study discovered that it also has a number of negative consequences for employees, including problems with family due to taking up valuable home space, failure to adjust to telecommuting, and a lack of support from leaders or coworkers (Chen, 2021). This proves that teachers working from home are unable to separate their personal and professional lives. Teachers see this as a delightful but complicated and difficult reality to balance between both lives and perform well (Jones & Kessler, 2020).

3-The continued regulation changes by the government or school management cause a lot of distraction to the teachers and thus reduce the quality of their work in the early stages of COVID-19.

4-Emposing digital transformation to the education sector without any prior or minimal training was a real challenge for the teachers or even education management. However, teachers' behavior was mostly negative at the early stages, once everything stabilized.

Chapter 3

Research Methodology

Chapter 3: Research Methodology

3.1 Introduction

This chapter discusses the methodology utilized to fulfill the study objectives of determining the influence of digital transformation on employees' behaviors during the COVID-19 pandemic in Bahrain's education sectors. These factors include digital literacy; a new way of working from home; a lack of proper instruction; and finally, the need for proper guidance and leadership encouragement. The chapter identifies the qualitative research methodologies used to collect data from teachers from Bahrain schools. Nonetheless, primary data was gathered via interviews and focus groups in order to gain the required resources and arrive at a conclusion.

3.2 Research Design

This research is designed to collect and evaluate data using a qualitative methodology approach. The qualitative technique was utilized to conduct in-depth interviews with teachers and at least one ambassador from education sectors who were adapting and using digital transformation technology to continue the education process during the COVID-19 pandemic. To gain a comprehensive understanding of the research topic and study the research objectives, both qualitative methodologies were used: interviews and focus groups.

3.3 Research Framework

Based on the literature, several factors have been identified that are related to the influence of digital transformation on employee behavior during COVID-19. However, the research approach for this study is to focus on four important criteria for the education sector that have been highlighted as a gap in the literature. The research framework is composed of the conceptual model illustrated in Figure 13.

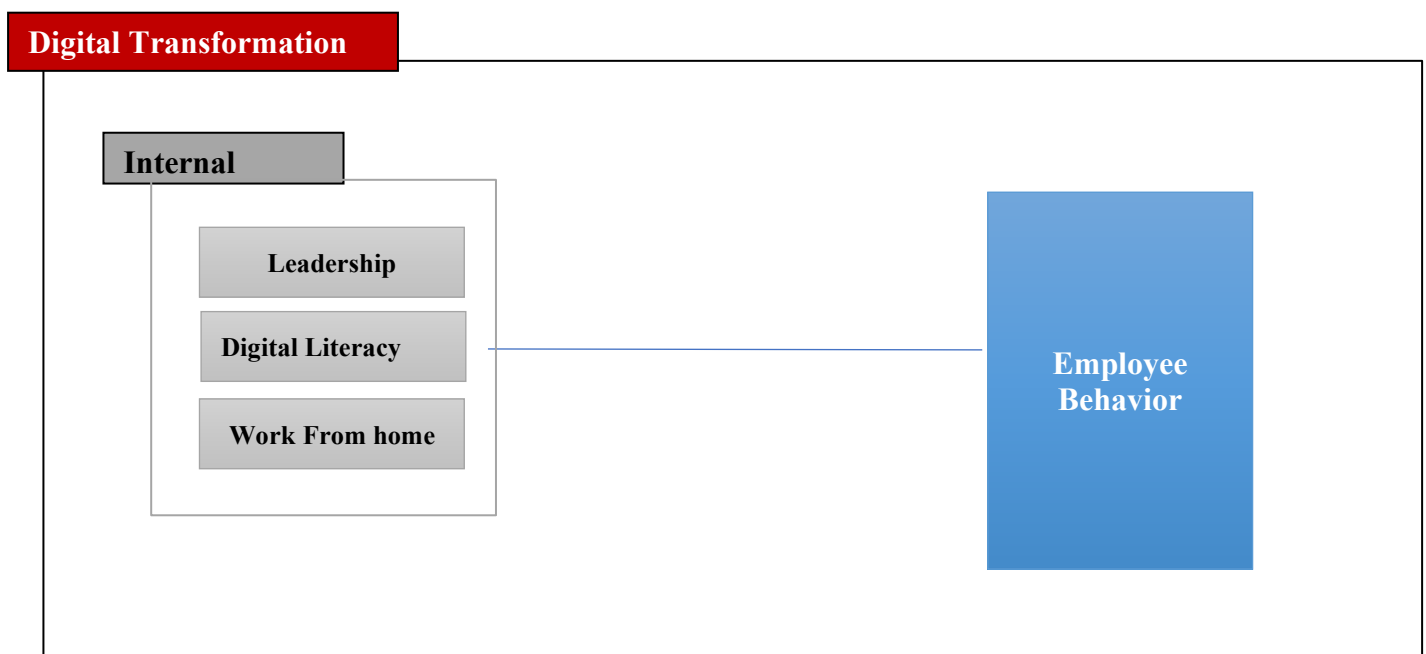


Figure 13: Conceptual Framework for Employee Behavior

3.4 Data Collection

The method used to collect the qualitative data was through in-depth interviews and focus groups teachers from Bahrain schools. The primary tools used to collect data were the following:

- a) Interviews: Qualitative data for the research was gathered through interviews. The interviews were done with teachers and at least one ambassador—teachers from Bahrain's schools. These interviews were done in a semi-structured manner using Microsoft team interviews, with the objective of obtaining the necessary knowledge concerning education employee behavior towards digital transformation. It enables us to focus on them while gaining in-depth personal experience and insight into how employees react to digital transformation. The instrument used for the interview is a set of open questions. Finally, the question captured information relating to demographic details such as age, gender, year of teaching, etc. The same questions used for interviews are used for focus groups.
- b) Focus Group: focus groups were organized with a total of two focus groups each with a 70-75-minute session. The session included max 4 teachers from a mix of private and public schools, out of which one ambassador teacher. A homogenous sampling approach was used to choose the participants to have a focused dynamic discussion with the participants' experience in this subject. The dynamic included the following: habits, behaviors, feelings, and the relationship between the digital transformation's internal influence on an employee's behavior. The advantage of small-group focus groups is that each participant's voice and viewpoint are heard. They are also a frequently used approach for qualitative data collection in educational research. Both sessions occurred

concurrently through Microsoft teams using the following set of open questions. The questions have been translated into Arabic and are presented after providing a brief introduction regarding the subject. All the discussion was done in Arabic based on the requests of the groups.

Table 2: Focus Groups and Interviews Questions

Topic	Questions used to guide focus group conversations
Opening General Questions	1. How many years have you been teaching at this school? ماهي مدة خبرتك في مجال التعليم؟ 2. What, in general, comes to mind when you think of Digital transformation (technology)? ما الذي يتبادر إلى ذهنك بشكل عام عندما تفكر في التحول الرقمي (التكنولوجيا)؟ 3. Are you aware of Bahrain Digital Transformation Strategy stated in Vision 2030? هل أنت على دراية باستراتيجية البحرين للتحول الرقمي الواردة في رؤية 2030؟ 4. What do you believe is the role of digital transformation in education sector? ما هو في اعتقادك دور التحول الرقمي في قطاع التعليم؟ 5. Do you believe that digital transformation is suitable to all school levels? Explain هل تعتقد أن التحول الرقمي مناسب لجميع المستويات المدرسية؟ يرجى التوضيح 6. Do you believe that digital transformation helps you during the pandemic? how? هل تعتقد أن التحول الرقمي ساعدك أثناء الوباء؟ كيف؟ 7. Do you believe that digital transformation jeopardizes your career? Explain? هل تعتقد أن التحول الرقمي يهدد حياتك المهنية؟ يرجى التوضيح 8. Does School provide you with the required infrastructure and how this effect your behavior (engagement, satisfaction or performance). هل وفرت لك المدرسة متطلبات التكنولوجيا المطلوبة وكيف أثر ذلك على سلوكك 9. How did the covid-19 affect your behavior? كيف أثرت جائحة كورونا على سلوكك الوظيفي؟

Leadership	10.From your perspective what is the role of your manager and management in enhancing your digital transformation experience during Corona? من وجهة نظرك، ما هو دور مديرك وإدارتك في تعزيز وتسهيل استخدام التحول الرقمي خلال كورونا؟ 11.Explain how your manager support in adopting digit transformation impact or influence your behavior? اشرح كيف أثر دعم مديرك في تبني التحول الرقمي على سلوكك؟ 12. What is your positive or negative feedback or challenges towards management style and support during covid19 (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه أسلوب الإدارة والدعم أثناء الجائحة (راضٍ للغاية، راضٍ ملتزم للغاية، ملتزم، أداء عالٍ، أداء منخفض)؟
Digital Literacy	13. How familiar are you with the technology? Did you get a proper training? ما مدى معرفتك بالتكنولوجيا المستخدمة اثناء الجائحة .هل حصلت على تدريب مناسب؟ 14. What kind of support, knowledge, and skills do teachers feel is essential for them to initiate or advance their use of technology? ما نوع الدعم والمعرفة والمهارات التي يشعر الموظفون أنها ضرورية لهم لبدء استخدامهم للتكنولوجيا أو تطويره؟ 15.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه محو الأمية الرقمية (مرضٍ للغاية، راضٍ ، ملتزم للغاية، ملتزم، أداء عالٍ ، أداء منخفض)
Work from Home	16.How many hours do you work daily on average compared to before covid-19? What is your behavior towards work from home concept? ما هو سلوكك او شعورك ؟كم ساعة تعمل يوميًا في المتوسط مقارنة بما كان عليه قبل الجائحة تجاه مفهوم العمل من المنزل؟

	17.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتكم الإيجابية أو السلبية أو التحديات التي تواجهكم تجاه محو الأمية الرقمية (مرضى للغاية، راضٍ، ملتزم للغاية، ملتزم ، أداء عالٍ ، أداء منخفض)؟
Closure	18.From your perspective what are other factor influences or challenges your behaviors? من وجهة نظرك، ما هي العوامل الأخرى التي تؤثر أو تتحدى سلوكياتك؟ 19.How do you think these challenges can be overcome? كيف برأيك يمكن التغلب على هذه التحديات؟

Demographic information

Table 3:Focus Groups and Interviews - Demographic Information

C1	Gender	A. Male	(1)
		B. Female	(2)
C2	Age	A. 20 or Below	(1)
		B. 21- 30	(2)
		C. 31- 40	(3)
		D. 41-50	(4)
		E. 51 or above	(5)
C3	Nationality	A. Bahraini	(1)
		B. Non-Bahraini	(2)
C4	Employment Level	A. Entry Level Employee	(1)
		B. Professional Grade Employee	(2)
		C. Middle Management	(3)
		D. Senior Management	(4)
		E. C-Level/Executive Level	(5)
C5	What size of your class?	A. 1-30 Students	(1)
		B. 31- 40 Students	(2)
		C. 41- 50 Students	(3)
		D. Above 50 Students	(4)

C6	How many years have you been teaching at this high school?	A. 0-2 years	(1)
		B. 3-5 years	(2)
		C. 6-10 years	(3)
		D. More than 11 years	(4)
C7	School Type	E. Private School	(1)
		F. Public School	(2)
C8	Teaching Level	Kinder garden	(1)
		primary	(2)
		Secondary	(3)
		High school	(4)
		university	(5)

3.5 Data Analysis

The research data for this study was collected in May 2022. There were two aspects to the data analysis. The first section will concentrate on the results of the interviews, while the second will concentrate on the results of the focus group. The findings will present and connect the interview results with those from the focus group in order to arrive at the best solutions to the research problems and then be used to back up the facts and replies gathered during the quantitative analysis.

The participants were chosen using a purposive sampling technique (Haenssger, 2019) since it allows for a deeper investigation of the topic the data came from teachers with at least three years of experience and above, from primary school and high school. The data collection was discontinued with the beginning of data saturation (Fusch & Ness, 2015). As a result, two focus groups

with a total of seven participants and five interviewees were interviewed. After two focus groups and the third interview, the data saturation point started.

Before the interview, respondents were informed about the study's topic and objective, and their agreement was obtained. In accordance with research ethics, all participants were assured in advance that all information and comments would be kept anonymous, and their identities would not be revealed. The interviews and focus groups were recorded for further analysis with the participants' consent and to preserve their conditionality. The school's name was not mentioned, and participants' names were hidden for some interviews as per the participant request. The recordings, interviews, and focus groups were all saved, processed, and analyzed with the highest level of privacy.

3.6 Research Methodology Summary

This chapter identifies the methods used to collect the data required to conduct the research. In summary, the qualitative method is used by conducting two focus groups with a total of seven participants and two interviews with a total of five participants from the education sector. The data collection was discontinued once it reached saturation.

Chapter 4

Results and Discussion

Chapter 4: Results and Discussion

4.1 Introduction

The data was gathered through two qualitative methods: in-depth interviews and focus groups. after reaching a saturation point when no new information was acquired in the last two sessions. All data was coded into eight major categories: pandemic impact; digital transformation impact in the education sector; appropriateness of digital transformation; threat of digital transformation on teachers; impact of digital infrastructure; digital leadership; digital literacy; and working from home. The results of both methods seem to work well together, which will be shown in more depth in the next section.

4.2 Results

The results combine both the findings from the in-depth interview and the focus group based on the above eight categories.

4.2.1 Focus Group and Interview

The rapid and persistent need to embrace the digital transformation during COVID-19, the pandemic, and the employees' behavior toward this change are the key reasons for undertaking such research, particularly in the education sector. Literally, education shifted to online teaching for all students all over the world.

The following focus groups and interviews were done to measure teachers' behaviors toward the digital transformation and its influence, in addition to their feedback and how they dealt with it during the pandemic. These semi-structured groups were performed by Microsoft teams, recorded, transcribed, and coded. Based on the similarity of the responses, the factors were categorized under

distinct headings. The finding was very remarkable. Teachers showed great engagement towards the digital transformation. In addition, they highlighted the major challenges that need to be addressed by the education sector in order to have a successful digital transformation journey. They also disclosed new factors that influence their behaviors. All of the respondents' explanations are listed below:

The pandemic Brings Out the Best of Teachers

The pandemic has a great influence on teachers, and each behaved differently, although the scarceness anxiety feeling of getting the virus exist specially at 2019 the start of the pandemic, most participants agreed that the pandemic encourages teachers in self-development to meet the new challenges and continue the teaching journey. They showed a very high spirit and high engagement as the "Team Bahrain". The greatest influence of the pandemic is the teachers' discovery of their great ability and talent to deal with crises and adapt and reshape their performance and themselves with technology and therefore continue the education mission.

On the other hand, two of the interviewees had challenging experiences with COVID-19, where the pandemic escalated their burden due to the sudden increase in working hours and double work. In addition to the anxiety of the virus, all of this resulted in high mental pressure and low performance even though they were doing their best. This was at the beginning of the pandemic. At a later stage, they managed to adapt.

Digital Transformation is the Reason for the Continuity of Education Journey

Teachers showed great acceptance of the transformation. Even though digital transformation is not new, the initiative was introduced in the education

sector as an optional strategy in some schools' "Future Schools" a few years ago. However, when COVID-19 forced the closure of the schools, the digital transformation was the best solution at the right time. One of the teachers quoted, "If not for the online learning, we could not survive the past two years." Furthermore, it is found that teachers are very eager and engaged to learn and even enhance the process. They proved to others that Bahrain, among the GCC, shows great attention and success story in adopting digital transformation and putting it into practice in a very short time due to the agility and openness of the teachers. It is credited to the Ministry of Education and the Kingdom of Bahrain, even though the GCC adopted Bahrain's education digital transformation strategy. The other point is that it introduces a very good advantage, as the teachers were satisfied with how fast and almost real-time communication with the parents was, which reduces so many layers of communication.

It was not the perfect scenario or direct adaption of the digital strategy from the beginning, and even though it was the perfect solution, it comes with its challenges for teachers. The pressure put on teachers to change their traditional methods of teaching to online learning in a very short time was extremely high. The digital strategy implementation was much more mature by 2020. One of the participants said, "It was difficult for us to transform at the beginning, but after a while it brings out our best".

Four of the participants supported traditional teaching and believed that online learning should be a temporary solution as it does save the situation. However, it does not provide the same quality as physical education and it lacks interaction between the teacher and students; they are dealing with voices. In particular, the camera was not mandatory for students, and this made them very frustrated and anxious to read their performance, whether they delivered the class properly. Therefore, they suggest that education should go back to physical education and use only some digital tools for assessments and grading.

Digital Transformation is Not Suitable for all Education Levels

Listening to the teacher's feedback regarding the influence of Digital transformation and whether it helps them in education, they all agree that embossing the online learning in education was extremely helpful and that it brings their best capabilities that they were unaware of in addition, they are feel satisfied about how the show how to they can manage a crisis and they were relieved to have a hybrid method for education. On the other hand, that all agrees that even though online learning was forced to every level primary school, secondary school, high school and universities. Primary school is supposed to remain as traditional teaching to maintain the students' foundation. They explain the reasons as follows:

1. It is challenging for kids, especially since teachers need to teach them physically how to hold the pin and read.
2. Kids must gain many physical skills, like social communication and writing skills.
3. Social communication is important at all school levels, especially primary school, where it must be done face-to-face.
4. A teacher can give information online but cannot build a student's personality behind the screen.
5. Teachers are not only information resources; their main responsibilities are teaching skills and manners as well.
6. Teachers prefer to tolerate the risk of having the virus by sending their own kids to school compared to having the kids learn online.
7. It was difficult for small kids to depend on them.

One of the participants quoted that "I notice that my third-grade student's (the pandemic patch) level is low compared to my previous students before the pandemic. It is like they missed two years of teaching even though I as a teacher made even double effort to teach them."

Due to the shift in technology, all participants were impressed with all the talent that they witnessed from the students. They also witnessed the evolution in the students' performance changes. Moreover, the experience that they gain increases the teacher's quality of teaching. Therefore, all agree that digital transformation is a success story at these levels. This makes them more agile to deliver a great digital experience to their students and build a future generation who can cope with college, work, and world wild directions.

Two of the participants who were externally against digital transformation at the beginning of the pandemic and who believed that it was only used for a temporary phase and who were in favor of traditional teaching are now adjusting to the change and accepting the fact that digital transformation has a great impact. However, they would prefer to provide a teacher. The flexibility to balance the teaching methods between physical attendance and online would increase our engagement and performance.

Digital Transformation is not a Threat on Teacher's Career

There was a 100% agreement from both interviews and focus group participants that digital transformation will never replace teachers; they actually both complement each other. Teachers play an important role in the education sector, and digital transformation is the evolution of education, providing flexibility, creativity, and a method for easily delivering information to students in an inspiring and exciting way." Transformation improves the quality of human life". It makes life easier and makes many processes much faster compared to traditional methods with their tools and culture. It saves time and effort.

Teachers prove it by providing the following reasons:

1. It is difficult to replace teachers with online recoded videos or artificial intelligence tools.

2. Primary school kids' teaching and skills cannot be replaced by a robot.
3. Digital transformation enhanced the teacher's skill development and showed the talent.
4. The teacher is not the source of information, but students still need the teacher to gain skills and be a role model.
5. The teacher is the source of follow-up and building the personality of the student.
6. The teacher's role might change, but in no way, can it be replaced by a reboot or artificial intelligence tool.
7. One of the main teacher evaluation criteria is the teacher's performance to enhance the student's personal development, not only the academic aspect.
8. "Digital transformation forces us to change our behavior and the way we deliver the academic and personal development aspects."
9. Teachers are the main source for guidance along with parents and society, so teacher jobs cannot be replaced.

Teachers also added that digital transformation could beat us and cause us to be replaced by other more talented substitutes if teachers did not reshape their style of education to cope with the change and enhance themselves. A creative teacher who improves her or his digital skills, copes with transformation, adds values, and uses technology for his or her own performance interests cannot be replaced; however, a teacher who stalls can be easily replaced. Teachers must change the way they deliver information in the digital era because we are preparing the next generation.

One of the participants quoted said, "The advantage of digital transformation is that it forces us to change our behavior and the way we deliver the academic and personal development aspects."

Despite the total agreement of the above reasons, the group of teachers also added that this change has affected many teachers who are older in age. They were not able to cope with the frequent changes and learn new and dynamic processes. Therefore, they decided to retire.

Lack of Digital Infrastructure Is not a Show Stopper for Teacher

Technology (tools and systems) is one of the main components that teachers require during the pandemic to shift to online teaching. This includes laptops, the internet, a safe environment, activity applications, electronic books, technical support, and smart boards. As the government's direction allows mothers to work from home, all of this infrastructure is also required at home.

Most of the participants (9 out of 12) from both interviews and focus groups agree on the fact that schools and the ministry did provide the infrastructure, but it was unreliable. There are many challenges in this area, and each comes with its own challenges:

1- Financial Issue of The Ministry- Teachers:

One of the main issues is that the Ministry of Education had a limited budget at that time, and therefore, had a limited number of laptops that could not cover all the teachers and even students, and all were old and slow. This was very challenging for teachers and was a huge financial crisis for teachers who had to share their personal laptops and internet for their own jobs plus their kids at home.

2- Infrastructure provided in the school only:

The school provided the infrastructure for the school only, and all mothers who were instructed to work from home were using their own laptops and the internet. Some mothers' teachers find this not convenient; therefore, they are voluntarily attending school while the

others are using their own personal laptops and the internet to finish the day. One of the teachers stated, "75% of employees were using their own internet and laptop, and sometimes even in school, using their phone data in order to complete their classes. This affected negatively the teacher's satisfaction and performance.

3- No standard application versions:

Teachers have to use their own personal laptops, and the provided laptops are either very old or their applications are outdated compared to our personal laptops. The same goes with students who use their own laptops. Therefore, teachers are making an extra effort to explain the same subject for each version. And here they all agree that the parents are giving them due time as they believe the teacher is not experienced enough to teach.

4- Internet slowness:

The same goes for the internet. The internet is extremely slow and only provided at school, so teachers have to buy their own internet.

There is a general agreement between the participants that "Implicitly, the school believes that providing the infrastructure is the responsibility of the teacher if they want an excellent evaluation or an improved performance in their class."

Overall behavior towards this factor is unsatisfied and going through a negative experience. They are not satisfied with it as they describe it and believe it to be reducing their performance, giving them hard time and pressure, and putting a lot of stress and burden on teachers. They agree that school management understands these glitches. However, teachers have stress from the parents as they blame them for their bad infrastructure.

Despite all of the above challenges, teachers showed extreme agility and openness toward the success of this change. The lack of infrastructure did not stop them. It was clear that they wanted to help the ministry and do whatever it took to keep teaching at the same high level. One of the teachers quoted, "This is not forced on us, it comes from our heart." Yes, it would be much appreciated if they provided the required, but we decided to be considerate and cooperate with the Ministry. "

Finally, three of the participants shared that their school provided all they needed for online learning, including technical support, and this was a relief.

Leadership is crucial for Teachers, but it Was Not Up to the Expectation

One aspect on which everyone agrees is that digital transformation is new to everyone, including us leaders, and we are learning as we go. The second total agreement between the teachers is that during the past two years they have dealt with a minimum of two management groups, and each has its own style of driving the digital transformation and the requirements from teachers for successful implementation. The first type of management was disorganized with giving ad-hoc solutions only to save the situation, and the second type was a proper management style with a clear digital plan, risk management, maintaining a regular meeting to properly implement the digital transformation plan, awarding scheme, and even considering all teachers' real issues (the psychological pressure, stress, lack of focus due to the environment, fear of low performance, and work from home technical issues). The overall employee's behavior indicated that they were unsatisfied with management even though at certain schools they had a positive experience.

Management glitches or downfalls are summarized as:

1- Management Communication

Management does not communicate with teachers or even involve them in digital decisions and sudden changes without considering all the effort put in and the effort required to start the new tool. Teachers believe that issues can be solved faster if there is a weekly meeting with the direct manager. However, if an issue is reported to management, it will take a month to report it to the ministry.

2- Management Role in Providing the Right Infrastructure

The digital transformation management was very supportive in pushing us to use and activate the initiative and provided great support to train the teachers. However, they had no luck providing the infrastructure and they passed the responsibility to the teachers. Some teachers decided to stop this behavior by stopping using their personal data and laptops for a while in order to show the management how many challenges they are facing with no support from them.

3- Fair of Bad Reputation

Most teachers agree that school management does not report any issue to the higher leader to maintain its reputation that it is the best school in digital adoption, this impacted the teacher and increase their frustration.

4- Seeking Support from Teacher

To survive the above challenges and have some sort of positive behavior despite the issues, teachers started to believe in themselves, help each other, and even started knowledge sharing among each other. One teacher quoted "we now realize that if we face issue will seek support from other teacher, it is much faster, and teacher gain more knowledge in digital tool". other said, "As proven, there are many teachers who I envy because they were successful in adopting digital transformation and have become masters at applying it and developing it."

5- Rejection of Work from Home

The management of some schools rejected the idea of working from home and required teachers to attend physically regardless of the severity of the virus or social distance, which frustrated the employees and added psychological pressure.

All of the aforementioned challenges resulting from disorganized management placed an additional burden and responsibility on teachers to make digital teaching a success story. In addition to confusion and low performance due to the change in management, one of the schools has three different managers each year and a totally new style. The micromanagement style and frequent fear of our performance made the teacher wish that teaching could go back to the traditional method. Lastly, the negative part was the extreme pressure to learn, use, and teach the new tool on the same day. And if teacher quality is not up to their standard, teachers are getting low-performance grades.

Nevertheless, teachers were thrilled with the organized management style, how they rewarded teachers for any extra digital initiative they took, technical support, frequent digital training to reduce the digital literacy for teachers as well as students, how they cared for and considered the teachers' personal issues, and finally, how management gave us our space, which made us engaged and like the transformation and be creative with it in the long run.

Digital Training is a big successful initiate Across Schools

Literacy is now defined as being illiterate in technology. Therefore, all teachers from the focus group and interviews agree that once the transformation is knocking on the teacher's door during the pandemic, digital training becomes a very important aspect as teachers have to learn not only how to use the technology but also how to spread this culture among themselves, students, and

parents in order to enhance the skills and cope with the digital era. Especially those teachers who are resisting the change and are very scared and not able to perform. These workshops help them a lot. Moreover, the training is not only within the school; it is a big initiative across the schools. This makes teachers very powerful and confident to share private and public schools' capacity concerns and experience and what are the best practices to enhance and develop as one unit. The Ministry and schools accomplish a great effort and noticeable knowledge and cultural change to develop the employee's capacity by providing internal and external training. Along with the training and workshops, they make sure the technical support is available all the way to reduce downtime.

Despite some minor challenges at the start of the pandemic, all teachers are very satisfied with how schools provided all kinds of training, step by step, in building our capabilities, and the ongoing support encourages them to introduce "train the trainer" to share the digital experience among each other, especially when one teacher becomes an expert in digitalization. Teachers are engaged to the level that they participate in finding the best digital way and best application to purchase with their own expenses to replace the paper activities that can help the students. One teacher quoted, "The Ministry did its best to adopt the transformation, and I am convinced that the person himself should have a motive and be engaged to practice and use the technology."

The only downfall the teachers are worried about is that these training are optional and during working hours and depend on the teacher's time. Therefore, teachers with busy schedules miss a lot and become behind the others. This also impacts their evaluation.

Work from Home initiative fit the Employees based on their personal Status

58% of Participants are in favor of work from home initiative, it is convenient and give teacher the comfort of teaching at the own home safely without the fair of the virus, and the comfort of working from anywhere even if there outside the country.

It depends on the personal status of the teacher. If a teacher has no kids or commitments, working from home is perfect. And it might be difficult for those teachers with kids and more responsibilities. Moreover, this initiative really balances work and personal life and makes teachers more engaged and satisfied to do only what is required. One teacher quoted, "It is a very positive initiative, but anyway, I am using my own laptop and the internet." It balances the work and personal life."

On the other hand, the remaining 42% of the participants had a negative experience, which made them feel exhausted, guilty of the feeling of not doing enough, frustrated due to micromanagement with working from home, mental and physical stress from work and personal life responsibilities at the same time, and finally a reduction in work quality, particularly for teachers with children.

All the above are due to the following reasons and challenges:

1. Teachers do double work, due to miscommunication of the requirements—"we don't understand how we need to do the job and management has no time to explain."
2. It consumes more of the teacher's time and introduces many distractions.
3. The guilt that the teachers feel like they are not doing their job properly, even though they are literally working from 7 to 2 PM nonstop and even spend more time and still the effort is not shown.

4. The combination of work and personal responsibilities (as a mother and wife) is like a multi-task, especially with the teacher's own kids in the home with no help.
5. The expectation of the management is to be available 24 hours. "If a teacher does not reply, it is causing a problem for her."
6. The teacher has no privacy anymore. The class is being evaluated and controlled by parents.
7. The teacher's personal life is exposed to the students.

Management Reaction Towards Work from Home

Even though the work from home initiative is an option decided by the government, the management allows teachers to use it. Second, in the first year of the pandemic, they considered the working hours as 24/7, however, this changed and was reduced by the second year. In addition, those teachers who were working from home are getting high and micromanagement monitoring compared to those working from school, which introduces a high load and stress on teachers.

Overall, they concluded that working from home can fit the person based on their personal status and they all agreed for post-pandemic to have work from home as a flexible option for teachers to choose.

4.3 Discussion

Following the review of literature on the influences of digital transformation on employee behavior during COVID-19, several factors were identified and validated by two methodologies: in-depth interviews and focus groups with expert teachers and middle management. In addition, the impact of the pandemic on employee behavior was also evaluated. They all agreed on the identified internal factors, and two of them added two extra factors that impacted their behaviors, which fulfilled the first objective of this research. Furthermore, they have shown the impact of the pandemic on their behavior, which fulfills the second objective.

Based on the above finding, it was clear that the result is mostly similar to the previous literature with minor differences.

1- Leadership

According to the literature, digital transformation leadership has a positive impact on employee performance and engagement if management is focused on having a healthy and smooth digital transformation (Wijayati et al.,2022), (Rangus & erne, 2017). The finding also proves this influence in general. We found that when teachers are led by a mature, well-oriented management team with a clear digital transformation plan, their performance and engagement are at their peak. Fully engaged, they even become experts and go beyond the expectations to help drive the transformation plan. However, if the management is disorganized, a teacher behaves with general frustration. The overall participant's behavior was unsatisfied with management, even though at certain schools they had a positive experience. However, this does not stop them from moving forward to make a difference.

2- Digital literacy

As per the literature review, adopting digital transformation introduces a strong relationship between employee engagement and digital literacies. Where digital literacies act as a moderator in the link between organizational digitization and employee engagement, as well as the association between creative culture and employee engagement (Chan et al., 2021). This was proven through the findings where the training program and culture change introduced by the Ministry have impacted positively on all teachers, not even those who once accepted the transformation, even those who were resisting the change. They were having excitement even from taking attendance online or how they could even handle a full class using a team. They made them stress and panicked. It was taking them two days to prepare for an online class or activity. However, with the support of the management and the plan to enhance digital literacy and build employee capacity, those teachers are much more comfortable and confident. In addition, the literature conclude that it was found that for those teachers with high digital literacy are more engaged in the digital transformation methods and more effective in the use of distant education platforms and social media. In contrast, those teachers with longer service periods and higher average age, their digital literacy is lower and therefore their participation is lower (Ata & Yıldırım, 2019). The finding also proves that, as witnessed by the undiscoverable talent and great effort put in by the teachers of Bahrain to continue the teaching journey, it was amazing. They even, at a later stage, become experts and train each other across schools.

It was discovered that teacher behavior is influenced not only by their own low digital literacy but also by the illiteracy of the students and parents.

3- Work from Home

In line with Gouédard et al. (2022), the finding shows that working from home has almost equally positive and negative impacts on employee performance, engagement, and satisfaction. Teachers with less personal life responsibility totally agree with this concept and it really impacts their behavior. They were happy, engaged, and focused, and they had no problem working extra hours. On the other hand, teachers with kids had a difficult time and low-quality work due to the mix-up of personal and profile life.

The other part which impacted the overall teaching is the management attitude in regards to allowing the concept to work from home and providing the required infrastructure and the micromanagement from some management. This caused general frustration. However, even though this was not a showstopper, teachers found other ways to survive the pandemic and the management action and went beyond what was expected to make it work.

The teachers argued and added two more influences which impacted their behavior.

1-Teacher Privacy: due to the exposure gained from the online class (video or audio), it is not only the student who is attending the class, but the whole family, and therefore each has no flexibility in the way they teach, displace the class, or give the assessments. The parents even interfere in the middle of the class, which creates a lot of disruption and gives the students the impression that the teacher is not in control. For that reason alone, they prefer traditional teaching.

2- Students Engagement: Teacher evaluation depends on student engagement in the class. Therefore, the digital training and infrastructure should be provided to the students as well by the ministry or school so that the teacher is not impacted

and gets blamed for their low performance, which impacts the teacher's evaluation.

In addition to the three factors, the following are how teachers view the contribution of digital transformation and pandemic on their behavior:

- 1- Pandemic Brings Out the Best of Teachers.
- 2- Digital Transformation is the Reason for the Continuity of Education Journey.
- 3-Digital Transformation is Not Suitable for all Education levels.
- 4-Digital Transformation is not a Threat on Teacher's Career.
- 5-Lack of Digital Infrastructure Is not a Show Stopper for Teacher.

Lastly, the pandemic has had a great influence on teachers, and each has behaved differently. Although the scarceness anxiety feeling of getting the virus exists, especially in 2019 the start of the pandemic, most participants agreed that the pandemic encourages teachers in self-development to meet the new challenges and continue the teaching journey. They showed very high spirit and high engagement as the "Team Bahrain". The greatest influence of the pandemic is the teachers' discovery of their great ability and talent to deal with crisis and adapt and reshape their performance and themselves with technology and therefore continue the education mission. The teachers believed that the introduction of the digital transformation during the pandemic was a must at a time where schools were all closed, and they also found that it did not jeopardize their careers. On the contrary, they complement each other. Finally, this does not imply that the pandemic was without difficulty; as described in the study, there were numerous challenges that impacted teachers both positively and negatively.

The overall reaction is that teachers, despite all the fatigue and stress, are fully engaged and willing to help the ministry to make digital transformation a

success story. However, the ministry or school should enhance many aspects and make things as flexible as possible for teachers.

4.4 Summary of the Discussion

Based on the focus groups and interview findings, eight major categories were identified which influence employee behavior directly or indirectly: pandemic impact; digital transformation impact in the education sector; appropriateness of digital transformation; threat of digital transformation on teachers; impact of digital infrastructure; digital leadership; digital literacy; and work from home. The results of both methods are found to complement each other and are presented in the following section in detail.

Chapter 5

Conclusion, Limitation and Recommendation

Chapter 5: Conclusion, Limitation and Recommendation

5.1 Introduction

This chapter concludes the research by presenting the findings, proposing recommendations, and suggesting areas for further research in influences of digital transformation on employees' behavior.

5.2 Conclusion

The main objective of the study is to explore the influences of digital transformation on employees' behavior during the COVID-19 pandemic and how the pandemic impacts them. This study explored several influences that impacted an employee's behavior positively or negatively. The most important influence found is digital leadership, which is the focal point for the success or failure of any big initiative such as digital transformation and the pandemic crisis. In both cases, the leader had a direct impact on the teacher by either motivating or discouraging them. Second, digital literacy is essential for continuing digital learning, culture, and technology use. Per the findings, this has a great influence on the teachers and has great potential for improvement. The final influence is the work from home concept, which is a new concept introduced or enforced, literally implemented by enforcement during the pandemic, and it shows equally positive and negative behavior by the employee. Last but not least, only four people said that the lack of privacy caused by the change and student engagement were important factors.

We can conclude that the pandemic has impacted the employees, especially at the early stage of the crisis with the total school closure and clarity of the way forward. However, as digital transformation started to be implemented and plans started to be placed into action, teachers have shown great engagement despite their fair and even gone beyond what is expected. There are many challenges that

need to be addressed by the school management and the Ministry. However, teachers are willing to help in every way possible to make a digital transformation a success story, cooperate with the worldwide digital era, and build a strong generation.

5.3 Implications for Research and Practice

The finding identified digital transformation influences on teachers' behaviors during COVID-19, along with all the challenges faced by teachers, and provided all kinds of solutions to reduce the risk of those challenges. The study highlights the components that produce severe problems, with great recommendations by an expert teacher on how to manage the risk and challenge for enhanced and better adoption. The findings of the study open the possibility for further research to validate the identified factors. This research lays the groundwork for identifying the most significant internal influences during COVID-19 to consider in order to overcome the problems that arise during and after the pandemic and how to use the challenges to the teacher's favor.

5.4 Research Limitation

This research focuses on the behavior of teachers toward digital transformation during the pandemic in the education sector of Bahrain with limitations.

5. limited to teachers and ambassador teachers.
6. limited to the education sector.
7. limited to the Kingdom of Bahrain.
8. limited to internal factors.

5.5 Recommendation

The recommendations of this research are directed towards the improvement of the employee's behaviors as follows:

1-To improve the digital transformation culture as follows:

- Education leaders and management should play a big part in involving their employees in the digital transformation journey.
- Educate the employees about the digital transformation strategy and involve them in the process.

2-To improve digital literacy:

- Provide a digital program after working hours or allow the teacher a free pass to attend during working hours.
- Include more digital training for students and parents.

3-To improve the work from home experience:

- Allow this program to be an option for the employees.
- Provide the proper infrastructure (internet, laptops, access to internal program phones, with maintenance) to employees who are working from home and students.
- Provide a balanced schedule between working from home and attending school for students only.

4-To improve the overall employee experience and engagement:

- Allow this program to be an option for the employees.
- Integrate two methods of teaching, traditional and online, and the percentage of digital transformation integration varies according to educational levels.
- Study and provide priority for low-income students (laptop and internet). This would help to completely transform as online learning is the future.
- cooperation from the management for the safety of the teachers.

- To continue using the digital assessments even if the management decides to go back to transitional teaching.

5.6 Future Work

Future research can be extended to include the following:

- As digital transformation is global and used in many fields, this research can be extended to other sectors and industries.
- Further studies on the same digital transformation factors affecting employee behavior on larger scale samples are needed.
- Further studies on the new digital transformation factors (e.g., employee privacy breach) affecting employee flexing and performance are needed.
- Further studies on the new digital transformation factors (employee student engagement) affect employee flexing and performance.
- Further studies on the new digital transformation factors (student and parents' digital literacy) affecting employee performance are needed.
- This research focuses on internal factors. Further studies are needed to also explore how to address external factors.
- This research covers the study of employee behavior during COVID-19. Future research can focus on employee behavior post COVID-19 and what is the strategy to strengthen the digital transformation in the education sector.

5.7 Summary

It can be concluded that the main influences of digital transformation on employee behavior are leadership, digital literacy, and working from home. In addition, privacy and student engagement are also influencing their behavior. On the other hand, despite the effects of the pandemic, employees showed very high spirit and engagement.

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7.0 Appendix

7.1 Focus group Question

Table 4:Focus Groups Questions

Topic	Questions used to guide focus group conversations
Opening General Questions	2. How many years have you been teaching at this school? ماهي مدة خبرتك في مجال التعليم؟ 2. What, in general, comes to mind when you think of Digital transformation (technology)? ما الذي يتبادر إلى ذهنك بشكل عام عندما تفكر في التحول الرقمي (التكنولوجيا)؟ 3.Are you aware of Bahrain Digital Transformation Strategy stated in Vision 2030? هل أنت على دراية باستراتيجية البحرين للتحول الرقمي الواردة في رؤية 2030؟ 4 What do you believe is the role of digital transformation in education sector? ما هو في اعتقادك دور التحول الرقمي في قطاع التعليم؟ 5.Do you believe that digital transformation is suitable to all school levels? Explain هل تعتقد أن التحول الرقمي مناسب لجميع المستويات المدرسية؟ يرجى التوضيح 6.Do you believe that digital transformation helps you during the pandemic? how? هل تعتقد أن التحول الرقمي ساعدك أثناء الوباء؟ كيف؟ 7.Do you believe that digital transformation jeopardizes your career? Explain? هل تعتقد أن التحول الرقمي يهدد حياتك المهنية؟ يرجى التوضيح 8. Does School provide you with the required infrastructure and how this effect your behavior (engagement, satisfaction or performance). هل وفرت لك المدرسة متطلبات التكنولوجيا المطلوبة وكيف أثر ذلك على سلوكك 9. How did the covid-19 affect your behavior? كيف أثرت جائحة كورونا على سلوكك الوظيفي؟

Leadership	10.From your perspective what is the role of your manager and management in enhancing your digital transformation experience during Corona? من وجهة نظرك، ما هو دور مديرك وإدارتك في تعزيز وتسهيل استخدام التحول الرقمي خلال كورونا؟ 11.Explain how your manager support in adopting digit transformation impact or influence your behavior? اشرح كيف أثر دعم مديرك في تبني التحول الرقمي على سلوكك؟ 12. What is your positive or negative feedback or challenges towards management style and support during covid19 (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه أسلوب الإدارة والدعم أثناء الجائحة (راضٍ للغاية، راضٍ ملتزم للغاية، ملتزم، أداء عالٍ، أداء منخفض)؟
Digital Literacy	13. How familiar are you with the technology? Did you get a proper training? ما مدى معرفتك بالتكنولوجيا المستخدمة اثناء الجائحة .هل حصلت على تدريب مناسب؟ 14. What kind of support, knowledge, and skills do teachers feel is essential for them to initiate or advance their use of technology? ما نوع الدعم والمعرفة والمهارات التي يشعر الموظفون أنها ضرورية لهم لبدء استخدامهم للتكنولوجيا أو تطويره؟ 15.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه محو الأمية الرقمية (مرضٍ للغاية، راضٍ ، ملتزم للغاية، ملتزم، أداء عالٍ ، أداء منخفض)
Work from Home	16.How many hours do you work daily on average compared to before covid-19? What is your behavior towards work from home concept? ما هو سلوكك أو شعورك ؟كم ساعة تعمل يوميًا في المتوسط مقارنة بما كان عليه قبل الجائحة تجاه مفهوم العمل من المنزل؟

	17.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتكم الإيجابية أو السلبية أو التحديات التي تواجهكم تجاه محو الأمية الرقمية (مرضى للغاية، راضٍ، ملتزم للغاية، ملتزم ، أداء عالٍ ، أداء منخفض)؟
Closure	18.From your perspective what are other factor influences or challenges your behaviors? من وجهة نظرك، ما هي العوامل الأخرى التي تؤثر أو تتحدى سلوكياتك؟ 19.How do you think these challenges can be overcome? كيف برأيك يمكن التغلب على هذه التحديات؟ .

7.2 In-depth interview Questions

Table 5: Interview Questions

Topic	Questions used to guide focus group conversations
Opening General Questions	3.How many years have you been teaching at this school? ما هي مدة خبرتك في مجال التعليم؟ 2. What, in general, comes to mind when you think of Digital transformation (technology)? ما الذي يتبادر إلى ذهنك بشكل عام عندما تفكر في التحول الرقمي (التكنولوجيا)؟ 3.Are you aware of Bahrain Digital Transformation Strategy stated in Vision 2030? هل أنت على دراية باستراتيجية البحرين للتحول الرقمي الواردة في رؤية 2030؟ 4 What do you believe is the role of digital transformation in education sector? ما هو في اعتقادك دور التحول الرقمي في قطاع التعليم؟ 5.Do you believe that digital transformation is suitable to all school levels? Explain هل تعتقد أن التحول الرقمي مناسب لجميع المستويات المدرسية؟ يرجى التوضيح

	6.Do you believe that digital transformation helps you during the pandemic? how? هل تعتقد أن التحول الرقمي ساعدك أثناء الوباء؟ كيف؟ 7.Do you believe that digital transformation jeopardizes your career? Explain? هل تعتقد أن التحول الرقمي يهدد حياتك المهنية؟ يرجى التوضيح 8. Does School provide you with the required infrastructure and how this effect your behavior (engagement, satisfaction or performance). هل وفرت لك المدرسة متطلبات التكنولوجيا المطلوبة وكيف أثر ذلك على سلوكك 9. How did the covid-19 affect your behavior? كيف أثرت جائحة كورونا على سلوكك الوظيفي؟
Leadership	10.From your perspective what is the role of your manager and management in enhancing your digital transformation experience during Corona? من وجهة نظرك، ما هو دور مديرك وإدارتك في تعزيز وتسهيل استخدام التحول الرقمي خلال كورونا؟ 11.Explain how your manager support in adopting digit transformation impact or influence your behavior? اشرح كيف أثر دعم مديرك في تبني التحول الرقمي على سلوكك؟ 12. What is your positive or negative feedback or challenges towards management style and support during covid19 (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظاتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه أسلوب الإدارة والدعم أثناء الجائحة (راضٍ للغاية، راضٍ ملتزم للغاية، ملتزم، أداء عالٍ، أداء منخفض)؟
Digital Literacy	13. How familiar are you with the technology? Did you get a proper training? ما مدى معرفتك بالتكنولوجيا المستخدمة أثناء الجائحة. هل حصلت على تدريب مناسب؟ 14. What kind of support, knowledge, and skills do teachers feel is essential for them to initiate or advance their use of technology?

	ما نوع الدعم والمعرفة والمهارات التي يشعر الموظفون أنها ضرورية لهم لبدء استخدامهم للتكنولوجيا أو تطويره؟ 15.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه محو الأمية الرقمية (مرضٍ للغاية، راضٍ، ملتزم للغاية، ملتزم، أداء عالٍ، أداء منخفض)
Work from Home	16.How many hours do you work daily on average compared to before covid-19? What is your behavior towards work from home concept? ما هو سلوكك أو شعورك؟ كم ساعة تعمل يوميًا في المتوسط مقارنة بما كان عليه قبل الجائحة تجاه مفهوم العمل من المنزل؟ 17.What is your positive or negative feedback or challenges towards digital literacy (very satisfies, satisfied, engaged very engaged, high performance, low performance)? ما هي ملاحظتك الإيجابية أو السلبية أو التحديات التي تواجهك تجاه محو الأمية الرقمية (مرضٍ للغاية، راضٍ، ملتزم للغاية، ملتزم، أداء عالٍ، أداء منخفض)؟
Closure	18.From your perspective what are other factor influences or challenges your behaviors? من وجهة نظرك، ما هي العوامل الأخرى التي تؤثر أو تتحدى سلوكياتك؟ 19.How do you think these challenges can be overcome? كيف برأيك يمكن التغلب على هذه التحديات؟ .

7.3 Demographic

The demographic has been developed using google forms, after each session the participate has been sent a link to fill their data.

In summary there were 12 participates, 5 from interview, 4 from the first focus group and 3 from the second focus group, there were all Bahrain females coming from different school level primary schools and secondary school. Around 58% are between again 21-30 years old and around 42% of them has over 11 years of experience.

Table 6:Demographic Information

Demographic Information	
Gender	
Female	12
Male	0
Age	
21-30	7
31-40	5
Nationality	
Bahraini	12
Non-Bahrain	0
Employment Level	
Entry Level Employee	8
Professional Grade Employee	3
Senior Management	1
Years of Experience	
0-2 years	0
3-5 years	5
6-10 years	3
More than 11 years	4
School Type	
Private School	1
Public School	11
Teaching Level	
primary	6
Secondary	3
High school	3

Demographic information

Table 7:Focus Groups and Interviews - Demographic Information

C1	Gender	C. Male	(1)
		D. Female	(2)
C2	Age	F. 20 or Below	(1)
		G. 21- 30	(2)
		H. 31- 40	(3)
		I. 41-50	(4)
		J. 51 or above	(5)

C3	Nationality	C. Bahraini	(1)
		D. Non-Bahraini	(2)
C4	Employment Level	F. Entry Level Employee	(1)
		G. Professional Grade Employee	(2)
		H. Middle Management	(3)
		I. Senior Management	(4)
		J. C-Level/Executive Level	(5)
C5	What size of your class?	E. 1-30 Students	(1)
		F. 31- 40 Students	(2)
		G. 41- 50 Students	(3)
		H. Above 50 Students	(4)
C6	How many years have you been teaching at this high school?	G. 0-2 years	(1)
		H. 3-5 years	(2)
		I. 6-10 years	(3)
		J. More than 11 years	(4)
C7	School Type	K. Private School	(1)
		L. Public School	(2)
C8	Teaching Level	Kinder garden	(1)
		primary	(2)
		Secondary	(3)
		High school	(4)
		university	(5)

الملخص

الهدف: الغرض من الاطروحة هو استكشاف تأثير التحول الرقمي على سلوك الموظفين خلال جائحة كورونا في قطاع التعليم في مملكة البحرين.

التصميم / المنهجية / النهج: الطريقة المستخدمة لإجراء هذه الرسالة هي إجراء تحليل نوعي من خلال طريقتين: مجموعات التركيز والمقابلات في مدارس البحرين من أجل مناقشة التأثير على سلوك الموظفين ومساعدتهم في التكيف مع التحول الرقمي خلال وباء كوفيد-19.

النتائج: اظهرت النتائج أن الوباء كان له تأثير على الموظفين ، لا سيما في المراحل الأولى من الأزمة. ومع ذلك ، مع بدء تنفيذ التحول الرقمي وبدء تنفيذ الخطط ، أظهر المعلمون مشاركة كبيرة على الرغم من خوفهم تجاوزوا ما كان متوقعًا. التأثيرات الداخلية الرئيسية التي أثرت على سلوك الموظف سواء إيجابًا أو سلبيًا هي القيادة والمعرفة الرقمية والعمل من المنزل. بالإضافة إلى خصوصية المعلمين ، يواجه المعلمون العديد من التحديات بسبب هذه العوامل.

قيود / آثار البحث: تركز الاطروحة على تأثيرات التحول الرقمي على سلوك الموظفين المحصور في قطاع التعليم في البحرين.

الآثار العملية: تضع هذه الأطروحة الأساس لتحديد أهم التأثيرات الداخلية خلال COVID-19 التي يجب مراعاتها من أجل التغلب على المشكلات التي تنشأ أثناء الجائحة وبعدها وكيفية الاستفادة من الدروس المستفادة والتحديات على نطاق أوسع وقطاعات مختلفة قدر الإمكان.

الأصالة / القيمة: تقدم هذه الأطروحة توصيات رئيسية نحو سد فجوة التحديات التي تظهر نتيجة للوباء والتحول الرقمي وتأثيره على سلوك الموظف

توصية: تعزيز تجربة الموظف الرقمي من خلال تحسين مفهوم الثقافة الرقمية والعمل من المنزل.

الكلمات الرئيسية: التحول الرقمي ، القيادة ، محو الأمية الرقمية ، العمل من المنزل ، الوباء ، COVID-19 ، الرقمنة ، سلوك الموظف ، إشراك الموظف ، رضا الموظف ، أداء الموظف

جامعة البحرين

قسم الإدارة والتسويق



كلية إدارة الأعمال

تأثير التحول الرقمي على سلوك الموظف أثناء جائحة كورونا

إطروحة مقدمة كجزء من متطلبات الحصول على درجة الماجستير
في إدارة الأعمال

إعداد

رنا محمد مبارك

الرقم الجامعي: ٢٠٠١٠٢٩٦

إشراف

د. مظفر أسعد

أستاذ مساعد

جامعة البحرين

مملكة البحرين

مايو ٢٠٢٢م