

**The Impact of Distance Learning Platforms on Education Management and its Effect
on the Attitudes of School Principals in UAE**

by

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STUDENT DECLARATION FORM

I affirm that the content of this research is the direct result of my own work. I declare that the work in this thesis was carried out in accordance with the regulations, no part of the thesis has been presented to any other university for any degree.

A handwritten signature in blue ink, consisting of two large, stylized loops at the top and a series of smaller, connected strokes below, forming a cursive or semi-cursive script.

Signature of Candidate

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Abstract

The pandemic has led to a shift in views on technology's role in learning, recognising its potential to foster continuous learning, engagement, and communication. This study investigates the impact of distance learning on education management and their implications on school principals' attitudes towards remote learning in the UAE. Remote education significantly impacts school management, with objectives expanding into blended learning, technical proficiency, and community development. This futuristic approach emphasises adaptability, flexibility, and the integration of technology in the changing educational landscape. This study, unlike others, focusses on the attitudes of principals towards online education to identify the constraints and gather data about managing remote learning and the implication for principals as educational leaders. The mixed methods analyses give the insights into the scale and implications of moving to remote learning on school principals and education management in the UAE.

Keywords: Remote education; UAE; principals' attitudes; mixed methods, survey and focus groups.

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Chapter 1: Introduction

1.1. Introduction

This chapter provides an overview of the study, followed by the research background. In addition, the research aim, objectives, questions, and nature of the study are also set out in here. Thirdly, there is an explanation of the significance of the study followed by a description of the organisation of the whole dissertation.

1.2. Overview

The outbreak of COVID led to a rapidly evolving situation that impacted the education system worldwide (Gewin et al., 2020). Remote learning is likely to remain important, ensuring the continuity of education. Teaching process has also become important by implementing various alternative strategies and practices to continue education. COVID brought remarkable challenges and have affected and challenged school principals, teachers, students, parents, and administrators in terms of moving to distance education methods (Tria, 2020). This research covers an aspect of the pandemic which remains under-researched and relates to remote learning and its effects on the attitudes of education managers and principals in the United Arab Emirates (UAE) and should prove relevant to schoolteachers, principals in other areas. Many schools and universities faced significant difficulties in continuing with their operation and delivering education to their students when schools and universities were closed because of the COVID/ the pandemic/lockdown (Boeren et al., 2020). Online schooling as introduced by many schools to deliver education to the students without any disruption. When remote learning programmes were introduced, principals and students and teachers experienced multiple challenges, but these programmes also contributed positively towards continuing the delivery of education (Lawrence et al., 2019). This study used mixed methods to gain statistical data and insights in participant understandings through both quantitative and qualitative data. Further, the research explores the potential challenges and opportunities related to using remote learning in the UAE that can further help planning in their approach if such a pandemic situation occurs again. Several pieces of research have emphasised the impact of remote learning on students

while this study provides data-based evidence and key insights into principals' attitudes and experiences (Alwamleh, Al-Twait and Al-Saht, 2020)

1.3 Research Background

Education Suggest Educational institutions around the world became increasingly reliant on remote teaching to deliver education during the COVID pandemic (Maatuk et al. 2022;Khalidi et al., 2023). The transformation from face to face to remote learning through online delivery, impacted educational management and administration in the process (Masoud and Bohra, 2020). Almost every country has begun to adopt online learning (Adams and Velarde, 2018). Even before the lockdown, the Ministry of Education, UAE, had planned to apply remote learning throughout the academic years 2019 and 2020 for all private and public schools and higher educational systems operating in the UAE for better continuity and progress of the educational process and safeguarding students (Ministry of Education, 2023).

The impact of online learning on education has become an issue of great interest for many studies globally due to the unprecedented scenario caused by the COVID lockdowns (Lassoued et al., 2020). Principals' attitudes play a vital role in shaping the overall school environment, including their interactions with students and teachers (Al-Karaki et al., 2021). Understanding the attitudes of principals towards remote learning sheds light on their willingness to adapt, their level of support for teachers and students, and their overall effectiveness in leading schools during the COVID pandemic. Engaging students in remote learning is also a problem for principals because this education system allows students more freedom than face-to-face instruction. The management has an impact on a variety of stakeholders within the educational ecosystem, including school principals, who influence the attitudes, relationships, and educational experiences of both students and teachers. This study investigates the impact that remote learning has on education management and the viewpoints of UAE school principals. By gaining knowledge of how principals react to remote learning, we can gain insight into their management abilities at times of crisis and their capacity to foster productive student-teacher-principal interactions in remote education.

1.4 The Education System in the UAE Context

The education system of the UAE is relatively new. In 1952, there were few formal schools in the country. In the 1960s and 1970s a school building programme expanded the education system. Now, education at the primary and secondary level is universal. In

the 2017-2018 academic year, approximately 1,080,000 students were enrolled at 1,219 public and private schools. Education reform focuses on better preparation, greater accountability, higher standards, and improved professionalism (AlBlooshi et al., 2016). While general strategy is determined by the Ministry of Education, education councils set up in individual Emirates assist in implementing government policy.

Education in the UAE has tried to keep a balance between input and output as well as between quantity and quality of activities, programmes and syllabuses. The public schools follow the standard national curriculum of the UAE. The language of instruction is Arabic for all subjects. English is taught as a second language and used for teaching technical or scientific subjects. The public schools are run by the UAE government where the education for UAE nationality children is provided and paid for by the state itself. Most public schools are gender-segregated and follow the Arabic curriculum with English as a second language (Pennington et al., 2017). The Ministry of Education applies the following stages and cycles for education in the government schools.

Kindergarten (4-5 years):

Kindergarten in the UAE is voluntary and accommodates children who are below the age of admission to the first grade. Kindergarten consists of two levels, where children attend two years of mixed-gender classes: Kindergarten 1 (KG1), Kindergarten 2 (KG2) This level prepares children to be successful at primary level or (Cycle 1) and beyond. KG students spend their time developing social, language, physical and academic skills.

Basic level: primary or elementary level/Cycle1 :

At this level, children complete Grades 1 to 4 with mixed gender. This level provides a rich learning environment to inspire this age group as they begin their educational journey.

Intermediate level/Cycle 2 :

At this level, children complete Grades 6 to 8. This level aims to nurture young students for the future and help them become fully developed members of society.

Secondary level/Cycle 3:

At this level, students complete Grades 9 to 12, they are prepared for the starting point of their

career and place in the society. Once this level is completed, the student will be granted a high school certificate, which indicates passing 12 years of compulsory education. Students who attended technical secondary school will be awarded the technical secondary diploma upon completing this level (Pennington et al., 2017).

The Ministry of Education have developed several strategies to bring significant qualitative improvement in the education system, especially in the way teachers teach and students learn. Smart learning programmes, new teachers' codes, licensing, and evaluations systems, as well as curriculum revision, including teaching math and science in English, are all part of the strategy. A key area of focus has been to transform K-12 programmes, to ensure that students are fully prepared to attend universities around the world and compete in the global marketplace. (Ajja et al.,2021). The Government promoted technology in schools to foster future employment and 21st century skills among young students in line with its strategy to introduce computers and tablets in all schools (Almuraqab, 2020).

1.5 The Key Roles and Responsibilities of the School Principal

Lampkin (2017) believes that, that school principals have a lot of responsibilities to conduct in order to develop a successful school. To be an effective school principal, there are nine roles and responsibilities which are: student discipline, teacher evaluation, develop and implement programme, review policies and procedures, relationship with parents and community and human resource management (Lampkin, 2017). The principal has to make use of the professional teachers through giving them opportunities to take the lead in making some important decisions. It is the principal's responsibility to provide professional training on problem solving skills that help them to be more independent and widen their knowledge. The effectiveness of a school principal is intricately tied to the skilful management of diverse responsibilities, fostering a collaborative and empowered teaching environment through strategic delegation and professional development.

1.6 Aim, Research Objectives and Research Questions

The following are the research's ultimate aims, research questions, and research objectives:

1.6.1 Research Aim

The purpose of this research is to determine the impact of remote learning on education management and their implications on school principals' attitudes towards remote learning in the UAE.

1.6.2 Research Questions

- What challenges have arisen for school principals ?? in the implementation of remote education processes during the COVID-19 pandemic?
- How did the unique challenges and dynamics of remote learning, change the perspectives and practices of school principals in the UAE during the COVID-19 pandemic?
- What are the recommendations and views on the future for remote education processes, and what relevance do they have for the future development of online learning.

1.6.3 Research Objectives

- To determine school principals' views on remote learning.
- To assess the impact of use of online learning on the attitudes of school principals in the UAE.
- To identify challenges and opportunities faced by adopting remote learning in the UAE.

1.7 Nature of the Study

The current research study utilises a mixed research method to collect and analyse data. The aim is to enhance the knowledge base regarding the impact of remote learning on education management and its implications on the attitudes of school principals in the UAE. The research used mixed methods – combining quantitative (survey) and qualitative (focus groups) methods, to uncover the multiple dimensions. The respondents were school principals whose attitudes and impressions were collected through quantitative and qualitative research methods. A survey of school administrators and principals was conducted to investigate experiences and reflections about using remote learning. Qualitative data were collected through focus groups with principals of both elementary and secondary schools from five public and five private schools. Survey responses and transcripts from the focus groups generated both quantitative and qualitative data.

1.8 Scope and Limitations of the Study

The study was limited by the short time available and lack of resources, but provides an introductory study which could be expanded in the future.

1.9 .Research Significance

Due to the COVID epidemic, there was a rise in the number of people participating in remote learning programmes throughout the world (Maatuk et al., 2022). The educational sector in the UAE has rapidly transitioned towards online and remote learning (Ministry of Education,

2023). Researching the repercussions of this shift is essential because of the implications it will have for management in the educational system (Alwamleh et al., 2020). This research has the potential to help overcome this gap by providing informative findings on how remote learning has altered the responsibilities and attitudes of school principals. The findings of this study have the potential to affect educational policies. Knowledge of the opportunities and challenges presented by remote learning is necessary to successfully manage education both during and after an outbreak. This study has the potential to shed light on the attitudes of school principals towards online education, which is a way for educational institutions to identify potential problems, roadblocks, and motivations. This information can aid in the provision of specialist support, teaching, and resources to principals, hence increasing the principals' effectiveness as educational leaders.

1.10. The Organisation of the Dissertation

This Introduction has described the background of the study. The Literature Review explains the main studies which have contributed to knowledge on this topic, and the Methodology chapter describes and justifies the methods used how this project has sought to add to this knowledge. A mixed approach using qualitative and quantitative methods was used to collect data from participants. The primary data findings are presented in Chapters 4 and 5, before the Discussions chapter seeks to pull all these strands together through interpretation of the main findings and development of recommendations and the describe the research and summarise the main findings.

Chapter 2 Literature Review

2.1 Distance Learning

The conventional definition of distance education pertains to the provision of instruction to individuals who are engaged in planned learning at a location or time that is distinct from that of the instructor or instructors (Moore and Kearsley 2011) This form of education can be delivered through various means such as print or electronic communications media (Anderson and Dron, 2011). This traditional interpretation is undergoing a gradual transformation due to emerging technological advancements (Simonson, Zvacek, and Smaldino, 2019) and the unprecedented crisis of COVID (Qazi et al., 2021) that compelled educators to rethink the notion of formal education and continuous knowledge acquisition.

On March 12th, 2020, the World Health Organization (WHO) declared that the outbreak of coronavirus disease (COVID), which was first identified in Wuhan, China, had reached the level of a global pandemic (WHO, 2020). Less than one week later, on March 18th, 2020, UNESCO reported that an estimated 107 nations had closed all schools due to the pandemic (United Nations Educational, Scientific and Cultural Organization, 2020). These school closures affected approximately 862 million school students, which represents almost half of the school-age population worldwide (Jackson et al., 2016; Abuhammad et al., 2020). As a result, remote learning thrives as a legitimate alternative to classroom instructions, as major cities around the globe are locked down by the COVID pandemic (Qazi et al., 2021).

It is an indication of growing acceptance of remote learning in Higher Education (Saif Almuraqab., 2020) attempted to examine if universities in the UAE should continue remote learning, even after the pandemic and tried to evaluate the perspectives of students. The study outcomes disclosed that most of the students (55%) want distance learning, while 45% of students prefer blended learning.

Several concepts in literature share similar definitions but possess fundamental differences yet are often utilised interchangeably. Examples of such concepts include open education, online education, virtual education, e-learning and m-learning, all of which represent distinct modalities of distance education characterized by unique methodologies or systems. While these concepts have similarities, it is important to examine the differences between them.

Online learning refers to any form of learning that takes place over the internet. It is a broad term that encompasses various educational activities conducted through digital platforms. Online learning can include both synchronous (real-time) and asynchronous (self-paced)

activities, such as courses, webinars, or interactive multimedia content. Distance learning involves the delivery of education to students who are geographically separated from the educational institution. It traditionally involves the use of correspondence courses, mail, or other methods of communication. In modern contexts, distance learning often involves online platforms, making it a subset of online learning. Virtual learning refers to the use of computer-based technologies to facilitate education. It can include a range of digital tools, simulations, and virtual environments to enhance the learning experience. Remote learning broadly refers to the provision of education outside of a physical classroom setting. It is a more encompassing term that includes various modes of delivering education when physical presence is not possible or preferred (Glebov et al., 2021)

Schools faced challenges in adapting to remote learning, including ensuring equal access to technology for all students, maintaining engagement and addressing the emotional and social impact of prolonged isolation. Teachers had to quickly adapt to new teaching methods, technology and virtual communication tools. Professional development and training were crucial during this transition. Pupils experienced changes in their learning environment, social interactions and daily routines, which could impact their well-being and educational progress. The timeline provides a general overview, and the specific details of adjustments based on the local context, governmental policies, and the progression of the pandemic situation in UAE

Period	Pandemic situation in UAE
March 2020	initial lockdown and school closures
April-May 2020	Transition to remote learning, In response to school closures, there was a rapid shift to remote learning. Schools and educators began to implement online teaching methods and virtual classrooms. Challenges emerged regarding technology access, online teaching resources and adapting curriculum for remote delivery
June-August 2020	Summer break and planning for the new academic year
September 2020	Start of the academic year with varied approaches
January 2021	Ongoing adjustments and vaccine rollouts
September 2021	Present: phased return and further Adaptations (Sajwani et al., 2022)

Currently, there is a growing interest in the potential of personalised remote education; accompanied by advancements in communication technologies (Rumble, 2019). Educational technologists decided the thoughtful design of instructional methods should drive the development of distance learning. Several studies (Simonson et al, 2019; Clark, 2020) have shown the benefits of personalised approaches to education, where learners' individual needs are considered. Moreover, the rapid progress in computer-related technologies have captured the attention of the public (Clark, 2020; Rumble, 2019), leading to increased awareness of distance education possibilities. For instance, the rise of online courses and virtual classrooms has become more prominent in recent years, attracting learners from diverse backgrounds. Additionally, the utilisation of asynchronous or time- delayed computer conferencing has demonstrated its potential to connect cohorts of learners over an extended duration (Orhan and Beyhan, 2020)

Holmberg (1989) provided a more precise definition of distance education, which encompasses the educational activities related to the cognitive, psycho-motor and affective domains of an individual learner, and the supporting organisation. Many authors note that asynchronous communication, which allows for communication to occur at any time and from any location, is a defining feature of this phenomenon (Holmberg, 1989). This feature is particularly appealing to individuals with professional and/or social obligations. Garrison and Shale (1987) propose a comprehensive and practical definition of distance education, which includes crucial criteria for developing a theory of distance education, encompassing non-contiguous communication, two-way interactive communication, and the utilization of technology to facilitate the necessary two-way communication.

Distance learning refers to methodologies that prioritise expanding the availability of education and training, liberating learners from temporal and spatial limitations (Rumble, 2019). The programme provides adaptable educational options for both individual and collective learners. This segment of education is experiencing a significant rate of growth (Bozkurt, 2019). The emergence of Internet-based technologies, specifically the World Wide Web, has underscored the potential influence of distance learning on education at large. The process of acquiring knowledge through distance learning can be characterized as the acquisition of knowledge through integration of computing and communication technology applications across multiple locations (Webster and Hackley, 1997). According to Casarotti et al.(2002), distance learning is characterized by the physical separation between the teacher and students, which is bridged through the utilization of technological resources. Distance education is a significant factor in

fostering social and economic progress (Parker, 2020). The integration of technology in educational systems is increasingly becoming a crucial component in both developed and developing nations (Simonson, Zvacek, and Smaldino, 2019). The increasing demand for ongoing skills enhancement and retraining, coupled with advancements in technology, has resulted in a surge of enthusiasm for remote education (Nkechinyere, 2020).

Online education is a broad term encompassing various forms of instruction delivered entirely via the internet, ranging from virtual classrooms to webinars and self-paced courses (Martin et al., 2020). On the other hand, E-learning, is a digital approach to learning that primarily utilises computers or electronic devices to access educational content (Mastan et al., 2022). This modality enables learners to access course materials, collaborate with peers, and interact with instructors through online platforms (Mastan et al., 2022). Mobile learning (m-learning) represents a subset of e-learning that specifically leverages mobile phones or tablets with wireless access. Unlike traditional e-learning, m-learning allows learners to access educational content on-the-go, providing both online and offline access to resources (Naciri et al., 2020).

However, for the purpose of this dissertation, the focus will be narrowed to remote learning. The aim is to explore the impact of remote learning platforms on education management and the attitudes of school principals in the UAE. Therefore, while acknowledging the existence of different modalities of remote learning, the scope of the research will primarily concentrate on remote learning as a broader concept.

2.2 Remote Learning and Success Factors

The outbreak of COVID has significantly accelerated the adoption of remote education (Tadesse and Muluye, 2020) as an alternative mode of academic delivery. As remote learning continues to evolve, various factors come into play, influencing its effectiveness and impact on education management (Tadesse and Muluye, 2020). This section of the Literature Review explores the role of technology in remote learning, examining the key factors that influence its implementation and the competencies required of educators in this virtual environment.

2.2.1 Technological Proficiency and Training

One of the critical factors affecting the success of remote learning is the level of technological proficiency among educators (Rumble, 2019). Marek, Chew and Wu (2021) suggest that instructors need to be well-versed in using educational technologies, Learning Management Systems (LMS), and various communication tools to facilitate seamless online interactions. In this regard, Pino and Merin (2020) believe that professional development workshops that focus on the latest technologies can help educators enhance their skills and adapt their teaching methods to the virtual environment to ensure a positive experience for both students and instructors, sufficient time and resources should be allocated for acquiring proficiency in both technological and pedagogical skills (Roth et al., 2020).

2.2.2 Pedagogical Adaptation and Mindset

Distance learning demands a shift in teaching methodologies and mindset for educators (Xiao, 2023). Sumardi and Nugrahani (2021) put forward that online instructors must adapt their teaching styles to engage students effectively in the virtual classroom. This requires a shift from traditional lecture-based teaching to more interactive (Alea et al. 2020) Teachers could effectively manage remote classes by embracing new teaching methods and being open to the challenges and opportunities of the virtual environment. Their flexibility highlights the significance of pedagogical knowledge, adaptability and a readiness to interact with developing educational platforms, eventually improving the quality of remote learning and student involvement.

2.2.3 Support from School Principals

School principals play a crucial role in promoting the integration of technology in education (Xiao, 2023; Marek, Chew and Wu; 2021). Their positive disposition towards technology encourages educators to embrace digital tools effectively in the classroom (Pino and Merin, 2020). By providing support and resources, school principals can empower educators to utilise technology for enhancing the learning experience. Mahmoud et al. (2022) emphasise that the assistance and encouragement provided by school principals can help educators recognise the benefits and capabilities of technology in the learning process.

2.2.3 Integration of Technology and Pedagogy

The successful implementation of remote learning requires a strategic integration of technology and pedagogy (Sokolov et al., 2020). Huang et al. (2020) highlight the significance of employing appropriate learning activities and contexts to achieve diverse learning outcomes and optimise the learning experience. Educators designing the courses with the support from

principals should prioritise meaningful interactions, collaborative activities and engaging content to foster active participation and knowledge retention in the virtual classroom (Shearer et al., 2020).

2.2.4 Cultural Considerations

Culture plays a significant role in forecasting the efficacy of a given distance education approach and instructional method (Saykili, 2018). To create an inclusive and engaging learning environment, course design should consider students' interests, cultural backgrounds, and the norms of the online community (Xiao, 2023). Ensuring that distance education aligns with students' cultural preferences and values can positively impact their motivation and learning outcomes (Marek, Chew and Wu; 2021).

2.2.5 Interaction and Instructional Support

Interaction between instructors and learners is a crucial aspect of successful remote learning. Instructors must provide instructional support and facilitation of learning through various means, such as timely feedback, question and answer sessions, and regular communication (Baber, 2020). Kang and Im (2013) emphasise the importance of creating opportunities for interaction to foster social intimacy and promote a sense of community in the virtual classroom.

2.2.6 Evolution of Remote Education Technologies

The implementation of remote educational technologies has evolved significantly over the years. From traditional correspondence education to multimedia-rich online learning experiences, remote education has leveraged advancements in information and communication technologies. Scholarly publications have extensively examined the issue of implementing distance education technologies, providing a robust foundation for practical implementation (Pfahl, & Smith, 2019; Valeeva, Karkina, & Starčić, 2018; Arkorful & Abaidoo, 2015).

In summary, technology plays a pivotal role in the effectiveness of distance learning. Educators' technological proficiency, pedagogical adaptation and mindset are crucial for creating a positive and engaging virtual learning experience. Support from school principals and a strategic integration of technology and pedagogy enhance the overall effectiveness of distance education. Cultural considerations and fostering interaction among learners contribute to a more inclusive and dynamic learning environment. The evolution of distance education

technologies has provided more influential as tools for practical implementation in modern educational settings.

2.3 Role and Responsibility of Education Management in Remote Learning

Remote learning brought significant changes to the education systems particularly during COVID-19 (Tadesse, and Muluye, 2020). A range of research studies reported that there are a lot of challenges that remote students have to face, such as internet connectivity, time and electricity issues (Sari and Nayır, 2020;). Rumble's research (2019) identified that different changes implemented in the education system offered students flexible learning options, hence avoiding educational problems. Unlike the conventional education system, students did not need to be physically present. The education system changes in the sense that students now can attend classes according to their flexibility of time and place (Nolasco, 2022). Moreover, Dhawan (2020) also suggests that online learning changed the educational system in a way that enhanced accessibility and affordability for students. Online learning has brought about significant changes in the educational system, reshaping the landscape of education management (Clark, 2020). Different scholars highlighted that the advent of remote learning platforms has revolutionised how educational institutions deliver and administer academic programmes (Rumble, 2019; Clark, 2020; Sari and Nayır, 2020). With the rise of online courses, virtual classrooms and Learning Management Systems (LMS), educators and administrators have had to adapt to new methodologies and technologies (Xiao, 2023).

Al Lily et al. (2020) indicated that remote learning has expanded access to education, allowing students from diverse geographical locations to participate in courses offered by institutions worldwide. Moreover, the flexibility of online learning has enabled students to pursue their studies while balancing work and other commitments (Lockee, 2021). Educational institutions have had to reevaluate their teaching strategies (Utomo, Sudayanto, and Saddhono, 2020), incorporating digital tools (Nuraini et al., 2020) and interactive learning methods (Oranburg, 2020) to engage students effectively in the virtual environment. Furthermore, Utomo, Sudayanto and Saddhono (2020) identified that education management has become more data-driven, with LMS providing valuable insights into student performance, engagement, and progress. However, with these transformative changes come challenges, such as ensuring equitable access to technology, fostering meaningful interactions between students and educators (Oranburg, 2020), and maintaining academic integrity in online assessments.

(Holden, Norris and Kuhlmeier, 2021). Despite these challenges, remote learning's impact on education management has opened new opportunities and possibilities for the design and management of education processes (Nuraini et al., 2020).

The design process of distance learning programmes includes the planning, development, implementation, and evaluation of the course included in the programme (Littlefield et al., 2020). Littlefield et al. (2020) indicated that an effective design helps teachers achieve course and programme success and propose a four-step design process. The first step is to analyse the needs of the stakeholders for online learning programmes. The second step is the planning of a programme, the third stage is the continuous planning of the programme to make it more effective and appropriate for meeting the needs of the audience. The fourth and last step is to implement the programme (Chaney et al., 2008). Neto et al. (2021) reflected on the importance of instructional designing and stated that in online learning programme, designing instructions is a central issue. Hence, instructional design should be more effective, reliable and efficient than traditional instructional methods. Ideally the instructional design includes all aspects of the learning environment such as following the organised processes that guiding students and teachers, enhancing the association between them, technology, and content. The study (Neto et al., 2021) also highlighted that the implementation of these designed programmes is equally important to gain success.

2.3 Role of School Principals in Remote Learning and Education Management

School principals play an important role in managing online classrooms and making them functional (Karakose et al., 2021). Potyrala et al. (2021) argue that the principal is responsible for developing and implementing policies for online classrooms to manage them better. By developing clear policies and guidelines for online classrooms, principals ensure the delivery of quality services to the students and experience for both teachers and students (Collie, 2021). It is the responsibility of principals to ensure access to technology for both teachers and students and provide them with the necessary support to develop an online learning environment (Karakose et al., 2021). If they are facing any issue, then principals should resolve their issues related to the technology by consulting with the IT department of the school or by coordinating with any third-party professionals. Moreover, principals facilitate and organise professional

development programmes for teachers to enhance their capabilities and skills in delivering quality education and effective online instruction to the students. Principals are responsible for managing online classrooms effectively by monitoring the teaching quality of teachers and providing feedback on their performance to deliver improvements (Pollock, 2020). According to Pollock (2020), principals bear the responsibility of fostering collaboration and coordination to mitigate any challenges encountered by students and teachers in the online teaching and learning environment.

During COVID remote learning, principals played a supportive role in facilitating remote learning by providing the necessary tools and environment (Collie, 2021). Principals are teachers who are given the task of leading schools including interactions occur between teachers delivering lessons and students. Principals are liable to ensure the delivery of quality education and they play a supportive role in remote education by changing their role as per the circumstances. During COVID pandemic, the UAE Government ensured that education should be provided remotely to ensure the safety of students and educators. They played a critical role in adapting to the online classes and engaging teachers (Elfrianto et al., 2020). Similarly, Alsaleh (2021) commented that principals fulfill an important role in remote learning by supervising online teachers and providing them with support and training for conducting online teaching sessions successfully, as well as communicating with parents, teachers and administration to facilitate remote learning. Potyrala et al. (2021) also reflected on the role of principals in remote learning and found that principals play an important role in facilitating remote learning, developing policies, engaging schoolteachers and students in online and remote education systems, and maintaining convenient coordination between all stakeholders.

2.5 Challenges and Opportunities in remote Learning

The popularity of remote learning has experienced a notable increase in recent years, primarily attributed to the emergence of online learning platforms and the escalating need for education that is adaptable and easily accessible (Sari and Nayır, 2020). Nevertheless, remote learning poses several challenges for students and instructors and for educational institutions in diverse nations (Yeh, and Tsai, 2022). This section examines a range of studies that have identified prevalent challenges and potential advantages linked to online and remote

education starting with various technological challenges.

2.5.1 Technological Challenges

The emergence of online and remote learning has presented technological obstacles for both educational institutions and students (Żammit, 2020) such as the requisite reliance on technological resources (Yeh, and Tsai, 2022). To actively engage in remote learning courses, it is imperative for both students and instructors to possess the necessary resources, such as computers, internet connectivity and various educational tools (Inan, 2021). This can pose a significant barrier for students lacking access to such resources or residing in regions with limited internet connectivity (Aljaraideh and Bataineh 2019). One additional technological obstacle that arises relates to the requirement for efficient online educational platforms (Aljaraideh and Bataineh 2019). It is imperative that these platforms exhibit a high degree of user-friendliness and offer a diverse range of functionalities, including, but not limited to, video-conferencing, discussion forums and online quizzes (Yeh, and Tsai, 2022). Aljaraideh and Bataineh (2019) suggest that the efficacy of student learning can be hindered if the online learning platform lacks a well-designed interface. In their study, Muilenburg and Berge (2005) identified various factors that can hinder the effective implementation of distance education. These factors encompass administrative challenges, technical competencies, and availability of internet connectivity. Aljaraideh and Bataineh (2019), placed particular emphasis on the importance of technological infrastructure as a major barrier to the implementation of online learning in Jordan. In a similar vein, Bates (2017) reported that Canadian educational institutions encountered difficulties stemming from inadequate resources and a dearth of educational technology expertise, thereby impeding administrative backing for online learning.

2.5.2 Student Engagement and Communication Barriers

Remote education can also pose difficulties in terms of student engagement and communication (Essel et al., 2020). Online students can experience a diminished sense of connection with their peers and instructors compared to their counterparts in a conventional classroom environment (Parker, 2020). This phenomenon can potentially pose challenges for students in terms of maintaining their motivation and seeking clarification through questioning (Yates et al., 2020). It is imperative for individuals to possess the capability to establish their own educational objectives and monitor their advancement (Aldossari and Altalhab, 2022). If students encounter difficulties in acquiring these skills, their ability to excel in remote learning courses can be compromised. Baticulon et al. (2021) and Van and Thi (2021) conducted studies

that examined the difficulties encountered by students in the Philippines and Vietnam, respectively, as they adapted to the shift towards online learning in the midst of the COVID pandemic. The research findings revealed that there are several challenges commonly encountered in the transition to online learning, including difficulties in adapting to the new format, managing familial responsibilities, experiencing a lack of social interaction, and facing limitations in internet accessibility. Nevertheless, the results also demonstrated a certain level of readiness among students possessing fundamental technical competencies.

2.5.3 Pedagogical competence and professional development

Pedagogical competence and professional development are crucial aspects for instructors engaged in online teaching, as they encounter various challenges in this domain (Korhonen et al., 2021). According to professionals must possess the capability to generate and present captivating and interactive digital content (Tosun,2021). In addition, it is imperative for educators to possess the capability to deliver constructive feedback to learners and foster interactive discourse within online discussion platforms (Tosun, 2021). Nevertheless, it is worth noting that a significant number of instructors can lack the essential pedagogical expertise or prior experience required to effectively deliver online instruction. This phenomenon can give rise to difficulties in the design, implementation, and evaluation of educational courses (Korhonen et al., 2021). A qualitative study conducted by Anastasakis et al. (2021) in Greece uncovered a notable absence of prior exposure to web-based education among numerous students, while instructors encountered difficulties pertaining to technical proficiency and the adaptation of course materials. The research emphasised the significance of continuous professional development in assisting educators to adapt to the evolving educational environment.

2.5.4 Adaptation of Curriculum and Grading Policies

In light of the transition to online learning, it may be necessary to modify the curriculum and grading policies to align with the online environment (Joosten and Cusatis, 2020). For instance, it can be necessary to modify the duration or structure of courses to better accommodate the diverse learning preferences exhibited by remote learners (Essel et al., 2020). It may be necessary to consider implementing more adaptable grading policies to accommodate the various difficulties associated with online learning, including technical issues and unanticipated situations (Joosten and Cusatis, 2020). The study on secondary school students in Saudi Arabia revealed various challenges pertaining to insufficient computer equipment, limited access to high-speed internet connectivity, and the necessity for curriculum adaptations

(Alshwiah, 2021) The presence of unclear grading policies has been observed to have a negative impact on students' motivation and efficiency (Ferri, et al., 2020).

2.5.5 The Positive Impact and Future Potential

Li et al. (2021) examined the experiences of postgraduate students in China, revealing that the utilisation of online learning platforms had a positive influence on the learning process. The study also provided suggestions, such as offering professional development opportunities for educators, implementing standardised and user-friendly online platforms and creating supplementary platforms to facilitate research and academic collaboration among graduate students. In general, although the utilisation of online and distance learning modalities can pose certain difficulties, it also affords prospects for enhancing and advancing educational methodologies. To optimise the efficacy and inclusivity of distance learning, it is imperative to tackle technological obstacles, improve pedagogical expertise and modify curriculum and grading practices.

2.6 Summary of Key Findings

The literature study highlights the value of online learning educational administration. The COVID epidemic accelerated the use of remote learning throughout the world. Its effectiveness is largely dependent on educators' technological aptitude, pedagogical flexibility, optimistic outlook and openness to experimenting with novel teaching techniques. The promotion of technology integration needs the backing of school principals. Effective distant learning involves thoughtfully integrating technology and pedagogy, considering cultural diversity, and encouraging interaction and instructional support. A basis for effective implementation is provided by the evolution of remote education technology from conventional lecturers to multimedia-rich online encounters. This review sheds light on how remote learning is affecting education administration and the perspectives of school administrators in the UAE. It does so by highlighting gaps, issues, and potential solutions. The advent of remote learning, which has been expedited by the global COVID pandemic, has significantly transformed the landscape of education management. Educational administrators addressed various obstacles by employing adaptable alternatives and incorporating technology into their practices. The advent of online learning has resulted in

enhanced accessibility to educational resources, albeit accompanied by challenges pertaining to technological infrastructure and limited opportunities for interpersonal engagement. During the pandemic, principals played a crucial role in adapting schools and facilitating stakeholder coordination, thereby managing remote classrooms, providing support to teachers and ensuring the delivery of quality education.

The rise in prominence of remote education is propelled by the utilisation of digital platforms and the imperative for enhanced accessibility. However, this phenomenon also brings a set of obstacles and prospects. Technological challenges encompass the issues of resource accessibility and the establishment of efficient online platforms. Issues such as student engagement, communication obstacles and time management challenges can arise. Pedagogical competence and ongoing professional growth are essential prerequisites mandated by instructors. It is imperative to implement curriculum and grading adaptations. Despite the presence of ongoing challenges, it is important to acknowledge the positive effects that have emerged, particularly in the realm of enhanced learning experiences. To maximize the effectiveness of remote learning, it is crucial to prioritise the resolution of technological obstacles, improve pedagogical competencies and tailor the curriculum accordingly.

2.7 Research Gap

The literature review provides an examination of the current state of distance learning, including its challenges and the transformative effects it has on the management of education. Nevertheless, it is worth noting that there exist specific domains within this dynamic discipline that would benefit from a comprehensive investigation, thereby enhancing the comprehension of its intricacies (Dubey et al., 2023). A notable deficiency in the existing body of literature concerns the domain of inclusive schooling and the accessibility of online learning (Suyatna and Viyanti, 2020). Although the review acknowledges the challenges associated with internet and technological access, it would be advantageous to further explore the specific obstacles encountered by students with impairments or those belonging to marginalised communities. It is imperative to conduct research on strategies and technologies aimed at addressing these challenges and facilitating equitable access to education. This is crucial to maintain the inclusivity of distance learning (Ferri, et al., 2020).

Moreover, although the review briefly mentions the significance of engagement among students, there is an opportunity to further explore distinct methodologies and innovative strategies that educators can utilise to sustain elevated levels of engagement within a virtual

learning setting. Through the examination of methods such as gamification, group assignments and interactive assessments, scholarly literature has the potential to illuminate effective strategies that can improve the learning experience and promote active engagement among students. Furthermore, there is a need for a comprehensive analysis of teacher education and development for professionals in the context of online instruction. Recognising the importance of technological competence and pedagogical flexibility, a more comprehensive investigation into effective strategies and programme that empower educators to thrive in the realm of virtual instruction can yield valuable insights (Woolf, 2010). Thus the extant literature review establishes a strong basis; however, these identified research gaps present opportunities for additional investigation.

2.8 Conclusion

The examination of existing literature offers a comprehensive comprehension of the complex characteristics of remote learning and its impact on the management of education. The concept of remote education is undergoing a transformation in light of technological progress and the global health crisis caused by the COVID pandemic. This evolution has given rise to diverse modalities, each presenting distinctive approaches to facilitate accessible and adaptable instruction. The efficacy of remote learning is contingent upon the technological competence of educators, their ability to adapt pedagogically, and the support provided by school principals. These factors contribute to a deliberate amalgamation of technology and pedagogy, taking into account cultural factors and fostering interactive learning environments. The field of education management has undergone significant changes to effectively address the complexities and advantages associated with online education. As a result, modifications have been made to curriculum design, grading systems, and instructional approaches. The role of principals has the potential to have significant impact in offering direction to teachers and supporting the incorporation of technology, while simultaneously addressing significant issues such as ensuring fair and equitable access to assets and fostering student engagement.

However, there are specific challenges that require careful consideration, such as the limitations posed by technological advances, the promotion of active participation and the improvement of pedagogical expertise. The review also underscores the necessity for additional research in areas under investigation that have not been adequately addressed particularly for strategies to: improve inclusion, increase innovation, promote student engagement, and support teacher education.

Chapter 3 Methodology

3.1 Research Philosophy

The concept of research philosophy serves as the foundational framework that defines the overall strategy a researcher adopts in conducting their study. This encapsulates the fundamental opinions, presumptions and guiding tenets that serve as the foundation for the decisions made concerning the design of research, the chosen technique, and the interpretation of the obtained results (Biesta and Gert, 2010). In the realm of research philosophy, there exist four fundamental paradigms: Positivism, Interpretivism, Realism and Pragmatism, (Plath, 2006) which provide researchers with unique perspectives and approaches to their research.

Positivism is widely recognized as a well-established research philosophy that places significant emphasis on acquiring knowledge through empirical observation and utilising quantifiable evidence (Cronen, 2001) Within the Positivist paradigm, the perception is that objective reality exists apart from individual subjectivity (Alharahsheh and Pius, 2020). Researchers adhere to rigorous scientific techniques, which prioritise utilising measurable factors and the discovery of causal correlations. This methodology is especially well-suited for research in which numerical data can provide insights and facilitate statistical analysis. (Hürlimann and Hürlimann, 2019).

Interpretivism presents a contrasting viewpoint to Positivism, positing that the construction of reality is influenced by the subjective interpretation and contextual factors introduced by human beings (Ryan, 2018). Al-Ababneh (2020) stated that, within this paradigm, scholars acknowledge the inherent subjectivity of human experiences and place significant emphasis on the investigation and analysis of individual viewpoints. Qualitative research methods, such as interviews, ethnography and content analysis, are frequently utilised to explore human behavioural complexities and the subjective interpretations individuals assign to their lived experiences .

Realism attempts to achieve a balance between the philosophical perspectives of Positivism and Interpretivism. (Betzner and Anne, 2008). The proposition asserts the existence of an objective reality apart from human experience while also recognizing that our comprehension of this reality is subject to interpretations (Biesta and Gert, 2010).

Realist scholars endeavour to investigate the nature of reality by employing a blend of quantitative and qualitative methodologies, acknowledging that certain facets of existence can be more effectively apprehended through diverse ways (Žukauskas et al., 2018). Realism is well-suited for academic inquiries that recognise the constraints inherent in excessive objectivity and subjectivity (Creswell et al., 2011).

Pragmatism is an epistemological and methodological approach that prioritises the practicality and utility of research endeavours. The argument posits that the value of a research philosophy rests in its capacity to provide useful outputs that can enlighten and guide actions and decision-making processes. By adopting a Pragmatic perspective, researchers emphasise the ability to employ a combination of quantitative and qualitative methodologies based on the specific research inquiry (Hürlimann and Hürlimann, 2019). Pragmatism promotes an outcome-driven view, aiming to integrate the merits of several research methodologies to get a holistic comprehension of intricate phenomena (Kaushik et al., 2019).

From a critical perspective, it is important to recognise that each research philosophy has its own strengths and limitations. The dependence on measurable data within Positivism can result in the oversight of multifaceted nature of human experiences, leading to oversimplification (Morgan, 2014). The emphasis on subjectivity within Interpretivism can be criticised for its limited generalisability, as it primarily focuses on context-specific phenomena (Lanham, 2006). The pursuit of Realism in research can help reconcile the occasionally divergent outcomes derived from quantitative and qualitative methodologies. Pragmatism improves and clarifies the meaning of its problems and provides ways to understand and evaluate their effects (Maxcy and Spencer, 2003).

3.2 Rationale for Selecting Pragmatism

The choice of Pragmatism as the theoretical framework for this study was influenced by its inherent flexibility, which enables the integration of many research methodologies to accommodate the complex character of the research topic. The ever-evolving nature of distant learning platforms has required an approach beyond measuring tangible results and instead explores the intricate human viewpoints that shape the educational setting. Using two methods provided different types of evidence to support the practical justification. The focus on practicality and usefulness within the framework of Pragmatism allowed for a thorough investigation into the perspectives on the changing landscape of education

management brought about by the implementation of remote learning. Quantitative research makes use of questionnaires, surveys to gather data. Focus groups, guided by Interpretivism principals, revealed the complex contextual factors and underlying motivations that might have been overlooked by relying only on quantitative data.

The integration of qualitative and quantitative methodologies in a pragmatic manner enhanced the comprehensiveness of the study, allowing for a thorough exploration of its varied aims.

The research deliberately aligned with a pragmatist research philosophy. The quantitative research takes a Positivist approach and the qualitative an Interpretative approach each using a different methodological framework. Moreover, the Pragmatic philosophical perspective aligns with the study's main objective, which is to offer practical and implementable insights that contribute to enhancing educational practices. The emphasis on Pragmatism in research that prioritises functional outcomes has helped the effective translation of findings into actionable suggestions for improving school management (Simpson, 2018).

The study acknowledges that the effects of remote learning covered complex qualitative components, such as changes in attitudes among school principals. As advocated by the Positivist approach, the exclusive reliance on quantitative analysis might have resulted in an oversimplification of these intricacies and an inability to comprehend the underlying motives and context-specific elements that can be uncovered through qualitative approaches (Xi-an, 2019). Hence, it was concluded that the Positivist method needed to be supplemented to address the study objectives holistically and effectively.

Although a comprehensive philosophy encompassing quantitative and qualitative methodologies, Realism was not chosen due to potential limitations in combining these two techniques effectively. The notable aspect of authenticity lies in its emphasis on comprehending an objective reality while acknowledging the influence of human interpretation. However, the research aimed to achieve a more cohesive integration of methodologies encompassing quantifiable effects and subjective perspectives, which realism cannot yet accommodate fully (Sale et al., 2022). The objective of this study was to investigate the views of school principals and examine the measurable impacts of remote learning platforms on education management.

3.3 Research Design and Strategies

A mixed-method approach, incorporating primary quantitative and qualitative data collection, was employed. This design was considered appropriate for researching the impact of remote teaching on educational management and the attitudes of school principals in the UAE.

A survey and focus groups were conducted to collect the information needed to complete the study. This approach combines quantitative analysis, using a structured questionnaire, and qualitative exploration through focus group interviews (Bentahar & Cameron, 2015).

3.4 Methods Employed in the Study

The questionnaire consists of open and closed questions (Maxwell, 2021). Closed questions gave standardised replies (Cadena-Iñiguez et al., 2017). Additional qualitative data came from open questions answers in the survey and the focus group transcripts. In addition to the quantitative survey, the qualitative investigations were conducted through focus group interviews. The study aimed to encompass schools with different educational stages under their supervision, enriching the research with diverse perspectives. Using a questionnaire allowed closed questions to be asked, providing objective measurement and evaluation as well as some qualitative data from the open questions.

3.5 Survey

Contact was initiated with all of the 1,289 school principals in UAE. A total of 296 sample responses, approximately 23% of the population were received from these schools. The survey was distributed via email with a web link to principals ensuring a comprehensive array of viewpoints and backgrounds. The questionnaire targeted all principals working across different educational stages, as the experiences of principals vary depending on the different educational stages they oversee.

The school's representatives, namely the principals, were requested to provide their opinions from each educational institution. The UAE has 1,289 educational institutions, encompassing both public and private schools. Formal permissions were given by the Ministry of Education, UAE to conduct the survey and a message was emailed to through the proper channels. Formal correspondence was sent to either through letters or emails, inviting them to participate in the survey. Response rates were improved by follow-up emails through the School Management Council (the researcher is a member) database. This facilitated the streamlined data collection process from the principals, significantly contributing to the successful attainment of the study's purpose. This chosen approach greatly enhanced the likelihood of achieving a high response

rate from the targeted participants, thereby greatly aiding in the successful accomplishment of the study's objectives. Correspondence was initiated with the administrative bodies of all schools to communicate the study's description and the underlying objectives for conducting the research. Designing the set of questions (items) intended to capture responses from respondents in a standardised manner, respondents could select an answer from a given set of choices, the difference between closed, ranking and open questions.

- Closed-ended questions are designed to provide specific answer choices, such as yes/no, agree/disagree. They are useful for gathering data that can be easily quantified and analysed and comparing participants' preferences, opinions, or characteristics.
- Open Questions: Participants can provide their own answers without any restrictions. These questions allow participants to provide detailed, qualitative responses in their own words and unanticipated by the researcher
- The School principals were contacted to assess the attitudes of school principals, a questionnaire was prepared to measure various variables, including the adoption of remote learning platforms, administrative process modifications in learning outcomes. The survey data aided formulating questions for the focus groups. The surveys encompassed four primary topics: strategic planning, roles and responsibilities, degree of technological expertise, and communication and motivation.

Determining the sample size for data collection considered an assurance interval of 95% and a margin of error of 5%. Additionally, the total number of private and public schools in the UAE (n=1289) was considered, which validated the selection of a suitable sample size (n=296). The chosen response rate was ideal since it has been determined by statistical calculations to be sufficient for acquiring the necessary data in this study. This enabled the derivation of dependable outcomes in response to the research inquiries. Kang (2021) has illustrated the significance of determining sample size to get heightened precision and statistically meaningful results. A survey was administered to collect data from the participants, with an anticipated response rate of 50%. According to Ali (2012), determining the response rate involves using data about the total number of participants sent the survey questionnaire.

A questionnaire was carefully crafted to measure various variables, including the adoption of remote learning platforms, administrative process modifications, and improvements in learning outcomes. The survey was distributed via email with a web link to principals. This approach ensured a comprehensive array of viewpoints and backgrounds.

Subsequently, the calculation involved examining the number of full questionnaires that were received from the population of research participants. The survey was done by first distributing questionnaires to schools in the research, considering the needed sample size of $n=296$. The school's representatives, namely the principals, were requested to provide their respective comments from each school. The entirety of the data was anticipated to be acquired from a total of 296 educational institutions, which was afterwards utilized for conducting data analysis. This involved using a survey for quantitative data.

. The formal correspondence was sent through the proper channels to various educational institutions, by email, inviting them to participate in the online survey. Respondents received an electronic mail request for participation in the survey with a link, upon completion of the respondent's survey, the results are instantly recorded in an online database. A clear message in the email stated, all information will be kept anonymous and will only be used for scientific research and development purposes. The survey data analysis involved descriptive analysis, a method of analysis that facilitates the concise summarisation of data to allow for the identification of patterns, enhancing the comprehension of the acquired datasets (Demir, 2018). Graphical and Tabular representation was used to provide an overview of the characteristics of the data set, including respondents' profiles and responses in the survey questionnaire. Prior to sending the survey to the participants it was piloted among colleagues and my supervisor. Once the questionnaire was completed by the respondents, the data were collated into an Excel spreadsheet giving all the answers for all the respondents. The survey responses were collected reporting how many participants answered including, with their demographic details. Charts were created using Excel to present the data on how people answered the Likert scale questions and details of the population socio-demographics, the standardised replies from the survey closed questions formed the quantitative data.

3.6 Focus groups.

Aligned with Interpretivist concepts, these focus groups aimed to explore subjective attitudes, experiences, and underlying motives that quantitative data cannot capture. Participants for the focus groups were selected based on survey responses, considering their experiences, educational qualifications, gender, nationality. Focus group discussions were conducted online and participants engaged in open discussion. The interactive sessions with the participants were connected through Microsoft Teams. The Microsoft transcription created the text for the analysis and checked with recording. The analysis involved identifying the significant elements revealed by each group's comments from the transcripts and researcher notes and contrasting and

comparing their perspectives. Additionally, four different focus groups had four participants each. Each focus group had a mixture of different type of participants, based on their experiences, educational qualifications, gender and nationalities. with, four different focus groupsof four participants each. The principals were selected from private and public schools cateringfor elementary and secondary education levels. This approach has been used toensure that each subject within the population has an equal likelihood and opportunity of being picked (Etikan and Bala, 2017).

The focus group discussions were conducted online and participants engaged in open discussion. The interactive sessions with the participants were connected through Microsoft Teams. The Microsoft transcriptions created the text for the analysis and were checked with the recordings. The analysis involved identifying the significant elements revealed byeach group's comments from the transcripts and researcher notes and contrasting and comparing their perspectives.

The focus groups illustrate various aspects of motivation and communication in remote learning. Each participant shared their viewpoints on the strategies they employed and the experiences they encountered while engaging in remote education, highlighting both their successes and challenges.

The analysis involved identifying the significant elements revealed by each group's comments from the transcripts and notes and contrasting and comparing their perspectives. The convergent-parallel approach has been considered a significant methodology that entails the simultaneous collection of qualitative and quantitative data, followed by their integration and evaluation (Demir et al., 2018)

Each participant shared their viewpoints on the strategies they employed and the experiences they encountered while engaging in virtual education, highlighting both their successes and challenges.The interviews were performed with consideration of the academic levels, gender, and years of experience of the school principals. It was anticipated that recently appointed principals might exhibit greater adaptability in embracing changes, particularly school technology and distant learning tactics. The analysis involved identifying the significant elements revealed by each group's comments and contrasting and comparing their perspectives and focus group discussion for qualitative data. The process of combining quantitative analysis and qualitative investigation was executed thoughtfully, aiming for a complete understanding. Collection of data including quantitative and qualitative data collection has been conducted to

uphold ethical issues. the potential ramifications of the study were elucidated to all participants. Subsequently, the consent form was distributed to them upon obtaining their consent. This followed the administration of a semi-structured survey questionnaire and the facilitation of a focus group discussion, both of which served as means for gathering quantitative and qualitative data. University of Central Lancashire ethics approval was obtained before commencing the fieldwork. This thorough process ensured the incorporation of ethical considerations into the research endeavour. The methodology employed in this study has been referred to as concurrent triangulation design (single-phase) due to the simultaneous and independent gathering and processing of data. (Dawadi et al., 2021)

3.7 Chapter Summary

The chapter has reflected on the research philosophy, research design and strategies and explained the choice of the methodology for this study. Mixed-methods research has been selected as the methodology to achieve the research aim and objectives, utilising a survey for quantitative data and focus group discussions for qualitative data (Al-Karaki et al., 2021). Comparing the analyses from the quantitative and qualitative parts of the research.

Chapter 4: Quantitative Data Analysis

Data discussed in this chapter was collected from questionnaires completed by principals and interviews conducted with focus groups. The interviews investigated themes including remote learning, the attitudes of principals and administrators, and education management. Specifically, the study examined how both remote learning and the attitudes of school principals and administrators influence education management the quantitative data analysed the patterns by interpreting the significance inherent in the gathered data. Despite early distrust and challenges being widespread, the participants think that technology has shown its value in fostering continuous learning, increasing engagement, and facilitating communication.

interviews

4.1 Quantitative Data Analysis

The analysis is presented in in tables and figures describing the impact of online learning and learning platforms on the orientation and practices of school principals in the UAE.

Table 1: Descriptive Statistics of the School Principals who responded to the Survey

Personal Characteristics	Frequency	Percentage
Gender		
Male	190	64.18
Female	106	35.18
Education		
Diploma	54	18.24
Bachelor's degree	70	23.64
Post Bachelor	69	23.31
Master's Degree	70	23.64
PhD	33	11.14
Experience in Years		
0-5 years	19	6.41
6-10 years	61	20.6
11-15 years	93	31.41
16-20 years	75	25.33
Above 20	48	16.21
School Characteristics		
School Type		
Kindergarten(3-5)	50	16.89
	35	

Cycle 1 (ages 6-9)	90	30.40
Cycle 2 (ages 10-13)	104	35.13
Cycle 3 (ages 14-18)	52	17.56
Nationality of Respondents		
UAE	152	51.35
Other Arab	97	32.77
Others	47	15.8

4.1.1 Descriptive Statistics of the School Principals

The data highlights disparities in population sizes across various educational phases, with "Cycle 2" being the most significant, followed by "Cycle 1," "Kindergarten," and "Cycle 3," each with corresponding student numbers. Nearly $\frac{2}{3}$ of respondents held a Bachelor's degree, post-graduate or masters degrees. Approximately 11% held PhDs. The distribution of participants provides insight into the demographic characteristics and histories of the individuals, including their gender, education level and nationality. They enable a more nuanced analysis of the replies, ensuring that any conclusions or insights derived are indicative of the many viewpoints and backgrounds within the group.

4.1.2 Description Remote Learning affected my School's Strategic Planning Priorities Positively (Based on Education)

The favourable impact of virtual learning on strategic learning priorities was cross-tabulated with the principal's educational level. Figure 1 illustrates the good effect that education has on people's planning techniques. Amongst graduates 81% agreed, while 18% disagreed. Among participants with post-bachelor's education, 78% agreed and 18% disagreed, the master's degree showed 83% agreement and 7% of disagreement, whereas the PhD degree respondents showed 85% with agreement and 5% of disagreement. There is also an age factor: people with PhDs are likely to be older. The neutral respondents from each category of degree showed below 12% of all the category of degrees. In each category of degree, the highest percentage was agreement and least percentage disagreed.

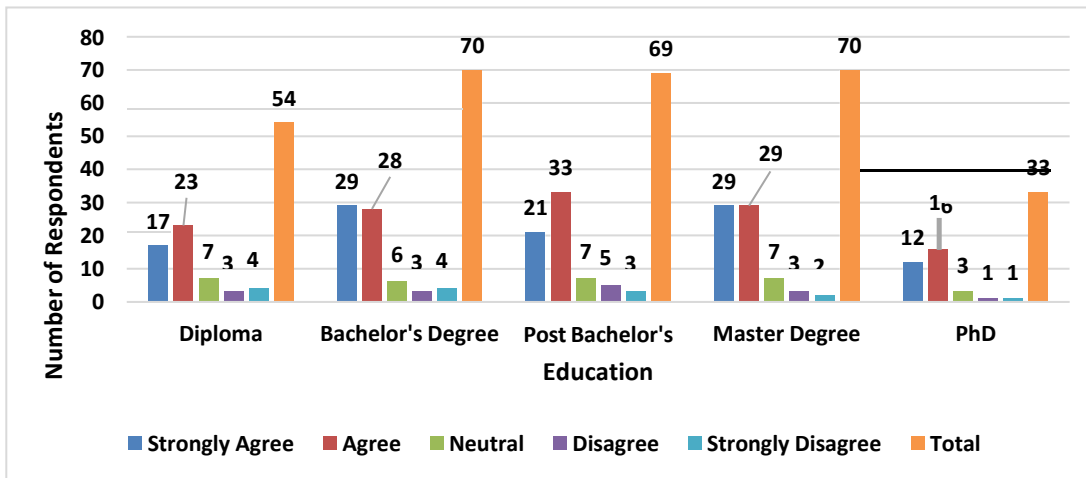


Figure 1 Remote Learning affected my School's Strategic Planning Priorities Positively

Figure 2 shows a cross tabulation of gender and impact of virtual learning on the strategic planning priorities positively. It indicates that 79% female agreed that their strategic planning improved due to virtual learning. Only 13% were neutral 8% disagreed the statement. Moreover, in the male category 81% agreed the statement and their strategic planning priorities improved. 8% neutral, and 11% disagreed, and virtual learning did not affect their priorities. In addition, mostly females respond that they strongly agree and mostly males recorded their response as 'agree'.

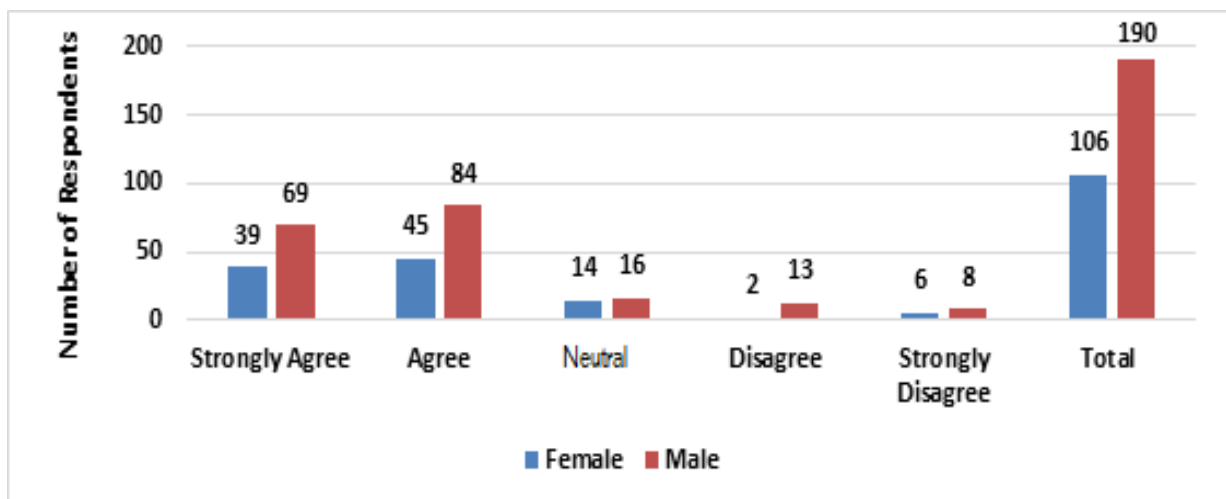


Figure 2 Remote Learning Affected My School's Strategic Planning Priorities positively

4.1.3 Remote Learning in Foreseeing the Future of Learning Platforms

The 296 participants were instructed to indicate their degree of agreement with the given statement by utilising a five-point rating system. Figure 3 provides an overview of the responses obtained from participants in relation to the statement: "The utilisation of virtual learning has improved management skills in anticipating the future of virtual learning and learning platforms." Out of the participants, a total of 108 persons expressed a "Strongly Agree" position, indicating a significant level of concurrence with the notion that virtual learning has made a valuable contribution to the cultivation of management abilities pertaining to visualizing the future of virtual learning and learning platforms. A total of 129 respondents expressed agreement, providing additional evidence for the proposition that virtual learning has contributed to the improvement of management abilities within this particular setting.

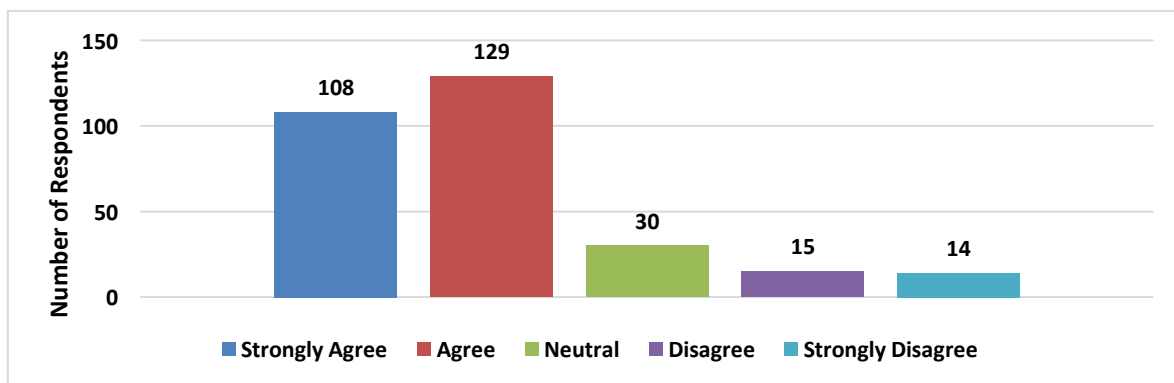


Figure 3 Remote Learning Enhanced Management Skills in Foreseeing the Future Learning and Learning Platforms

In contrast, a total of 30 participants opted for the "Neutral" alternative, indicating a condition of ambivalence or absence of definitive concurrence or dissent towards the given statement. A minority of participants, including 15 individuals, held a dissenting perspective, indicating a contrasting notion that virtual learning did not make a substantial contribution to the cultivation of management qualities relevant to forthcoming virtual learning situations. The female characteristics are influenced by factors include their interest, level of management skills. A total of 14 participants expressed a strong disagreement, signifying a resolute opposition to the given statement. In brief, the table provides valuable insights into the diverse perspectives around the influence of virtual learning on the development of management qualities, particularly in relation to the future of virtual learning and learning platforms. The prevailing

inclination among participants was towards agreement, while a diverse range of opinions is evident in the replies, spanning from strong opposition.

4.1.4 Remote learning effect and positive planning and priorities

Figure 4 displays responses to the question on virtual learning effect and positive planning and priorities. Out of the total number of participants, a total of 87 persons selected the option "Strongly Agree," signifying a resolute and affirmative agreement with the statement. Furthermore, a total of 133 individuals provided responses indicating agreement, indicating a prevailing consensus about the correctness of the statement.

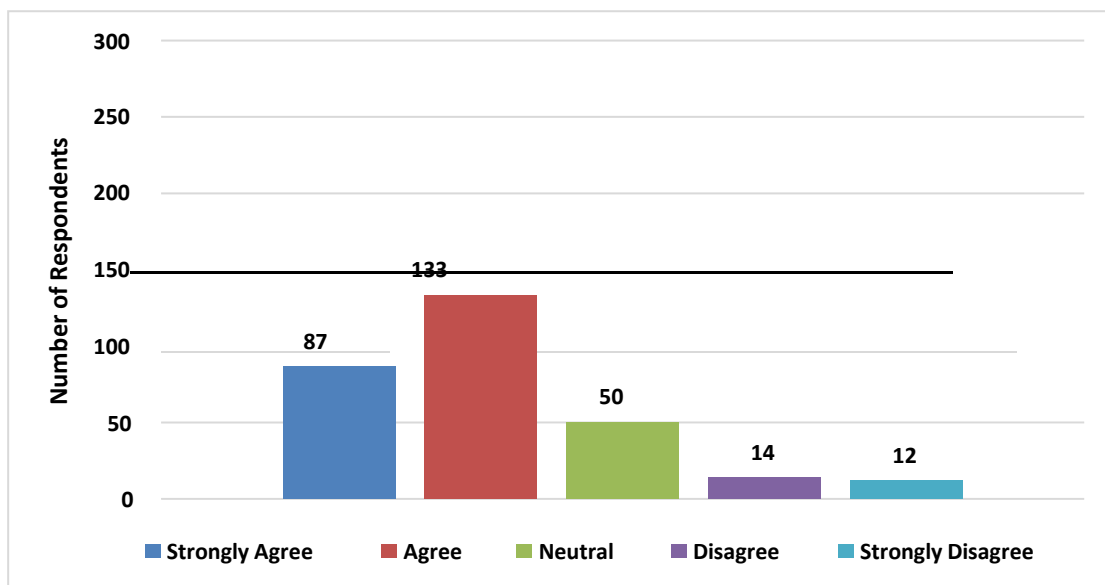


Figure 4 Remote Learning affected my School's Strategic Planning Priorities positively

A significant proportion of the participants, totalling 50 individuals, expressed a "Neutral" stance, signifying a lack of pronounced inclination towards either supporting or opposing the statement. This might be due to not being aware of technology and principals believing they need to work as per their schedule. Interestingly they did not indicate that face-to-face was better than the online mode. This group thinks differently to disagree because of the notable particulars including pace of learning, level of education, experience, type of approach, and flexibility. Conversely, a minority subset consisting of 14 participants answered "Disagree," indicating a notable variance in perspectives pertaining to the given assertion. In addition, the data shown in the table indicate that a total of 12 participants expressed a "Strongly Disagree" response, so constituting a minority group characterized by a firm dissent towards the statement. They were not content with online mode or complexities they faced during online mode. So, they thought face-to-face was good for them and there is no significant impact on

them. The figure presents a full depiction of answer distribution, indicating that most respondents tend to agree (by merging "Strongly Agree" and "Agree"). However, it is worth noting that there is also a significant presence of neutral and dissenting perspectives. In addition, 9% disagreed (merged disagree and strongly disagree) and virtual learning has nothing effect on their planning priorities.

4.1.5 Learning Challenges

Figure 5 depicts the results of the question in which participants were requested to articulate their viewpoints or attitudes towards enhancement of management skills by identifying learning challenges. Out of a total of 296 respondents 107 expressed strong agreement. In addition, 126 agreed with the statement about the skills improvement. It appears that these principals managed the virtual learning and used this to enhance management skills, and this has worked well for them. In addition, 21% were either neutral or disagreed about the statement of management skills enhancement. There might be reason that these principals did not consider it important for management skills enhancement because this may not be reasonable medium to improve skills or there is nothing new in this platform for them.

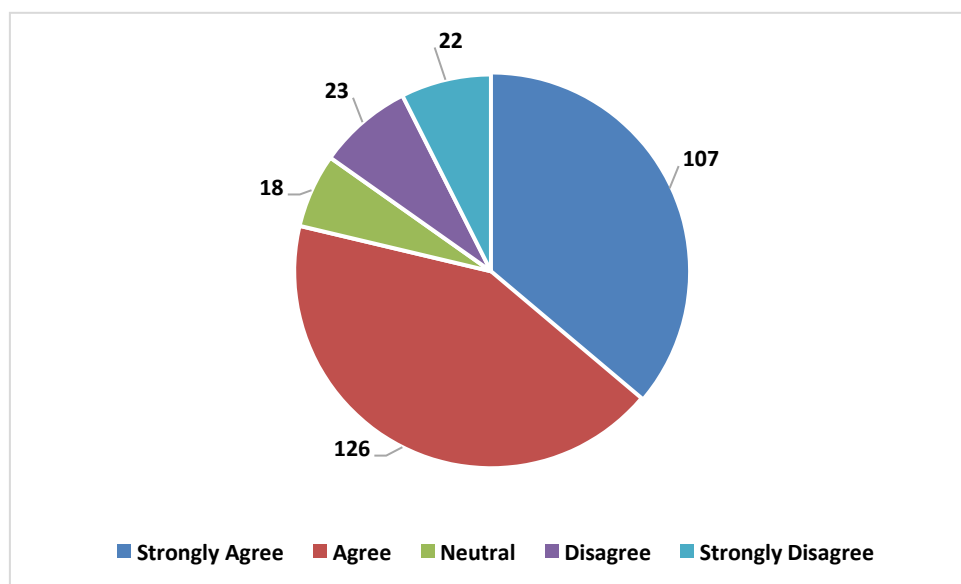


Figure 5 Remote Learning enhanced my Management Skills in Identifying Learning Challenges

4.1.6 Strategies from the Standard Approaches to cope with the New Technology

The data obtained indicate that there are differing levels of consensus among the respondents in relation to the adoption of different strategies and standard approach to cope new technology. In Figure 6, the range of viewpoints observed highlights the many perspectives present among

the participants polled, emphasising the necessity for more investigation to fully grasp the underlying variables that contribute to the various levels of disagreement and agreement. Total of 38% demonstrated strong agreement and 42% agree, indicating a substantial level of agreement to cope up with new technology. Notably, a total of 10% individuals adopted a neutral position, indicating a notable absence of clear tendency or preference. Furthermore, a total of only 6% participants expressed disagreement and 4% with severe disagreement, this indicating a relatively limited proportion of those who held significant misgivings.

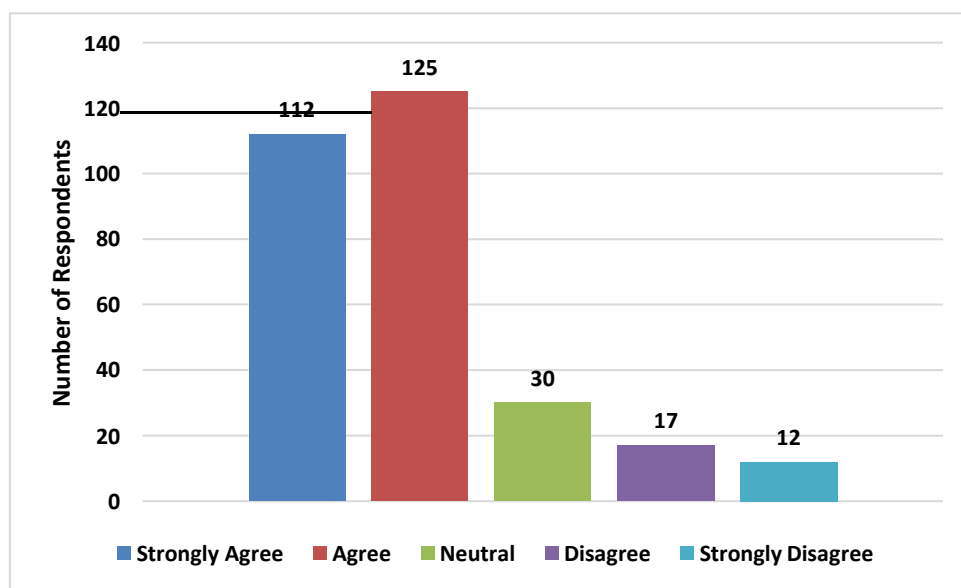


Figure 6 Schools need to Adopt different Strategies from the Standard Approaches to cope with the new technology

4.1.7 Remote Transformation and Adopting Professional Development Plan

In Figure 7, the frequencies presented provide insights into the opinions and attitudes of the participants. Remarkably, a total of 120 principals demonstrated a noteworthy consensus by expressing either strong agreement or agreement with the idea, so signifying a substantial inclination towards accepting virtual change. This group thinks differently to disagree because of the notable factors including age factor above 20, In addition, a total of 28 respondents adopted a neutral position, maybe suggesting a cautious evaluation or a requirement for further information. In contrast, it is noteworthy that very few participants conveyed their dissent. This virtual learning did not help them to develop their professional plan, or they were already equipped well and did not consider it extraordinary to advance a professional strategy. Thus, the statistics highlight the importance of the proposed plan for professional growth within the framework of virtual transformation. The analysis of these replies might yield significant

information for customising methods that address the diverse inclinations and concerns of individuals.

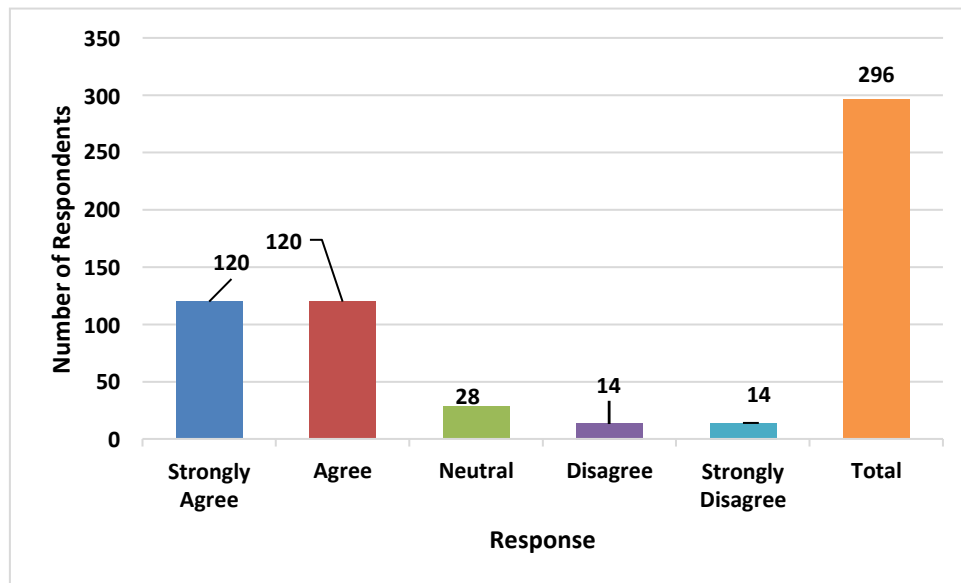


Figure 7 Virtual Transformation and Adopting Professional Development Plan

4.1.8 Remote Transformation and Development of Skills in the Field of Technology

The frequency distribution of Figure 8 below encompasses the spectrum of viewpoints articulated by respondents in relation of virtual transformation and development of skills in the field of technology. The objectives are set to improve the skills in technology including accessing the platforms and development as a part of evaluation. The data reveal a significant proportion of respondents, 40%, who expressed strong agreement with the topic. The substantial agreement observed indicates a significant consensus among this group of participants. Furthermore, an additional 125 people demonstrated concurrence, so reinforcing the dominant optimistic attitude. A total of 20% dissenting – 9.5% disagreeing, including 4% strongly by respondents in relation of virtual transformation and development of skills in the field of technology. The presence of contrasting perspectives within the questioned population is underscored by this discrepancy. Meanwhile, a group of 30 participants adopted a stance of neutrality, indicating a certain level of ambivalence or absence of strong tendency. The presence of a wide range of viewpoints highlights the intricate nature of the subject matter and the many perspectives through which it is understood. It is important to do deeper investigation into the underlying factors that contribute to the varying degrees of consensus and divergence. These insights have the potential to enhance the depth of comprehension of the subject matter and provide guidance in efforts to reconcile disparities in knowledge

or resolve any apprehensions.

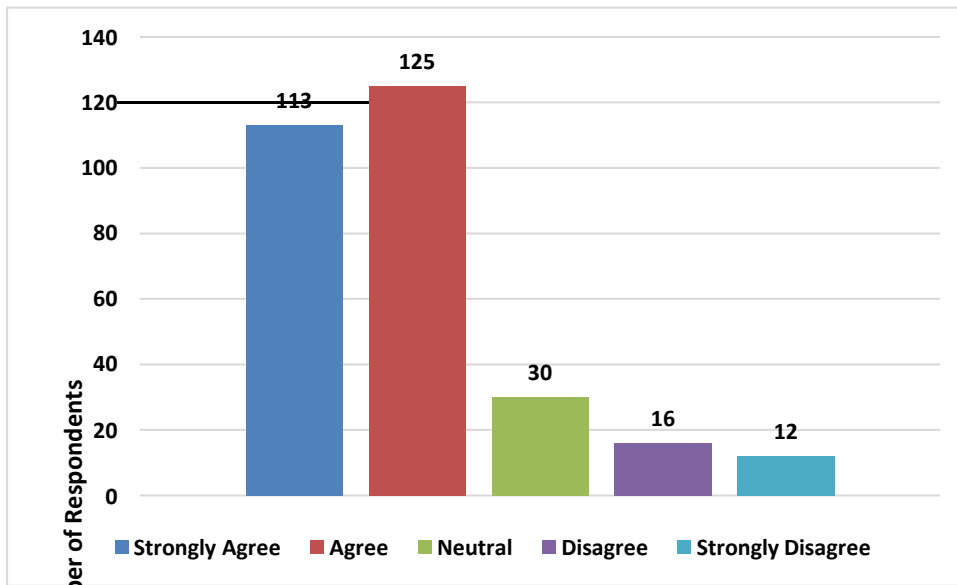


Figure 8-2 Remote Transformation And Development of Skills in the Field Of Technology

4.1.9 Remote Learning contributed to increase all my school Staff Motivation

The frequency distribution of Figure 9 provides a complete overview of the viewpoints expressed by participants about virtual learning to increase the staff motivation. It is worth noting that a considerable proportion of participants, 50%, expressed a high level of agreement that virtual learning increased school staff motivation. Moreover, a total of 107 participants demonstrated their agreement, so strengthening the prevailing optimistic attitude.

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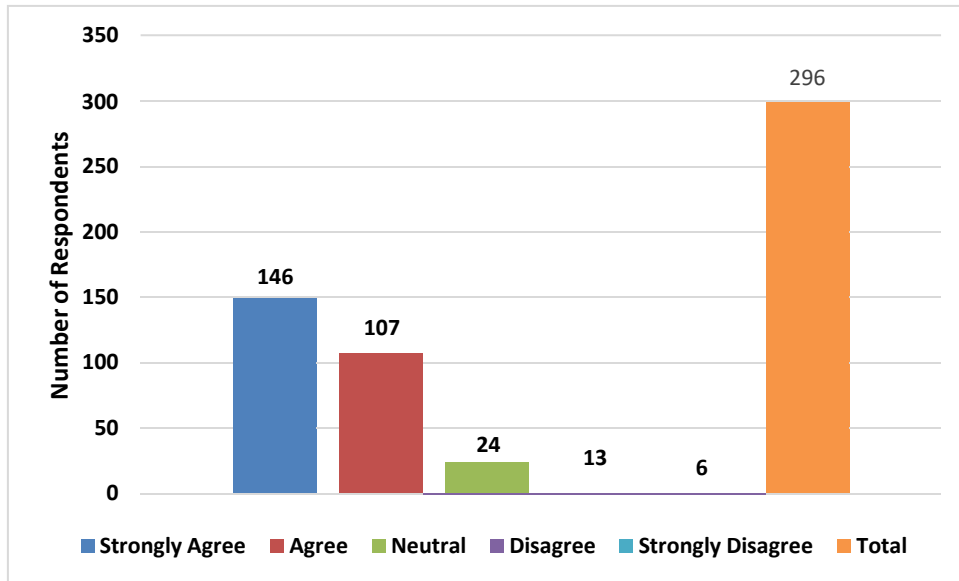


Figure 9 Remote Learning contributed to increase all my school Staff Motivation

In contrast, a total of 13 individuals expressed their dissenting views, with an even more limited subset of 6 participants expressing their strong disagreement. The existence of divergent perspectives within the surveyed population is evidenced by these dissident viewpoints. A group of 24 participants exhibited a neutral position, indicating a certain level of neutrality or a need for further knowledge. The motivation is effective through face-to-face teaching compared to remote learning for the female participants. The dataset exhibits a wide range of viewpoints, highlighting the intricate nature of the issue and the many interpretations offered by participants. Further exploration of the fundamental justifications behind these varying degrees of concurrence and discord might provide helpful perspectives. By comprehending the many circumstances that influence these viewpoints, individuals may actively participate in more substantial dialogues, effectively tackle apprehensions, and perhaps attain a more intricate comprehension of the topic at hand.

4.1.10 Rearrangement of the most prominent aspects of the technology skills that you acquired in Remote learning

The respondents were asked to rearrange the list of prominent technology skills they acquired in remote learning, see Figure 10. Out the total of 296 respondents, 47 % selected the Zoom and Teams type to acquire technology skills. While 112 prioritise the learning

platform provided to them to enhance their skills on technological learning. Very few respondents selected the One Drive or Microsoft new version with 29 and 15 responses respectively. This shows that mostly principals used the commonly used learning platform to advance their technological skills during virtual experience of learning. This description also depicts that variation in results has the diverse background of chosen learning platforms.

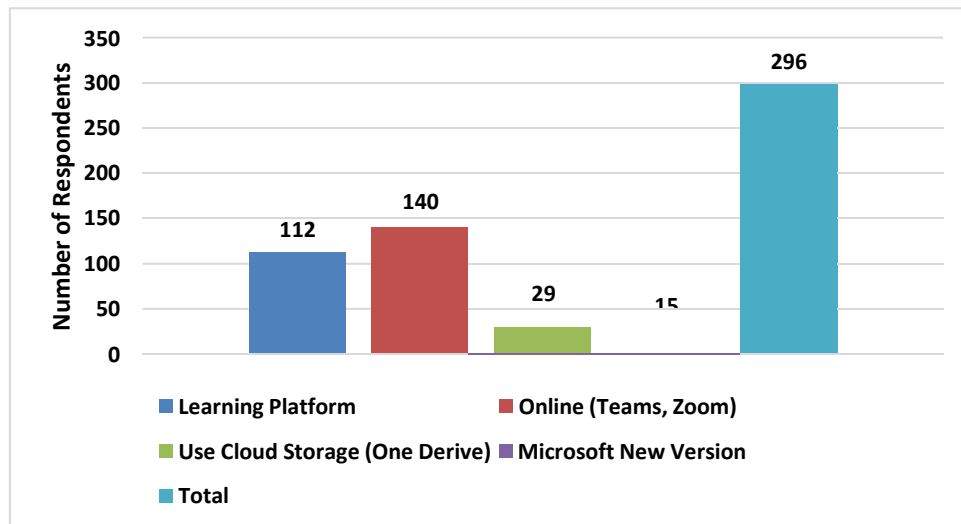


Figure 10 Rearrangement of the most prominent aspects of the technology skills that you acquired in Remote learning

4.1.11 Principals’ Communication Experience with Teachers before and after Remote Learning

The questions and their answers are described in the following sections.

- Remote Learning affected my school's strategic planning priorities positively.
- Remote learning enhanced my management skills in identifying learning challenges.
- Remote learning enhanced my management skills in foreseeing the future of Remote learning and learning platforms
- Remote learning enhanced my management skills in developing solutions to overcome the learning challenges.

The frequency distribution presented in Figure 11 offers valuable insights into the perspectives of the participants both before and after their engagement and communication with teachers through virtual learning. Notably, a total of 103 participants shared their reflections before participating in virtual learning activities. The responses were categorised into different

per-centage ranges, with most respondents (59%) indicating that they believed 50% communication was adequate before their remote learning experience. Meanwhile, 15% of respondents felt that their communication was better prior to their remote learning experience. It is important to note that various modes or platforms for virtual learning were utilised, reflecting the diverse backgrounds of schools and principals. These initial impressions provide a foundational reference point for evaluating the subsequent effects of virtual learning. In contrast, following their participation in virtual learning activities, a total of $\frac{2}{3}$ of the individuals provided their thoughts. The significant increase in the number of responses indicates a substantial level of engagement with the Remote learning platform.

The "pre" and "post" statistics, give insights into the transformational characteristics of virtual education. After remote learning, flexibility and adaptability are the most prominent factors for good communication. The transition from pre-conceived beliefs to post-experience observations underscores the capacity for viewpoints to undergo transformation. The available data indicate that virtual learning has exerted a significant impact on participants, leading to a noticeable rise in the number of replies following their interaction with the online educational platform.

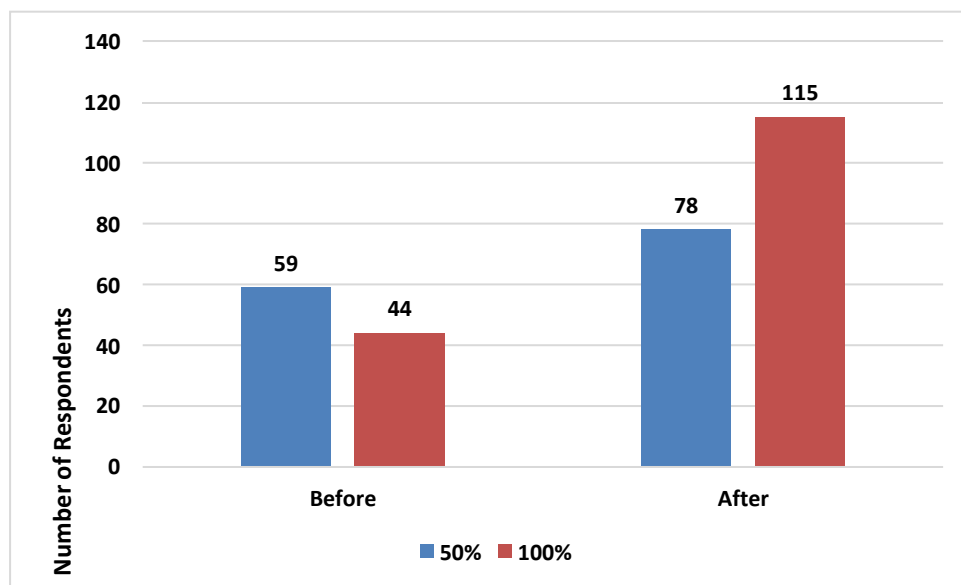


Figure 11 Principals' Communication Experience with Teachers before and after Remote Virtual Learning

4.2 Thematic Analysis of Open-ended Questions

What types of challenges did you encounter in your online programme?

A) Three major challenges and their solutions are derived from the answers of participants and thematic analysis

Challenges: There were challenges related to mode of technology adaptation because it requires skills, competencies other than face-to-face classes and communication. Moreover, challenge was to ensure the quality and effectiveness of classroom virtual learning by looking at the learning, participation and engagement of students and teachers and to address the technical issues like software issues, glitches in website or internet disconnectivity.

Solutions Implemented: Training was provided to principals and teachers for effective and efficient use of Remote learning. Various strategies were implemented to solve the second challenge including interactive tools, monitoring, supporting and learning environment and feedback. Technical issues were resolved by establishing the technical support team to help and resolve the issues during classes and remote learning.

B) New roles have been created by transformation to remote learning

Three major roles derived from the respondents are presented in themes such as technical producers, technical mediators and technical providers. Technical producers are students who use the online platform and submit their assignments, coursework and use them in full capacity. In addition providers are the technicalsupport team affiliated with this work to provide smooth services.

Chapter 5: Qualitative Data Analysis

The interviews investigated themes including remote learning, the attitudes of principals and administrators, and education management. Specifically, the study examined how both remote learning and the attitudes of school principals and administrators influence education management. Thematic analysis was applied to explore the non-numeric data to identify patterns within the data sets. Clarke and Braun (2018) use this methodology to analyse qualitative data and identify patterns by interpreting the significance inherent in the gathered data. The focus groups were selected based on the mixture of characteristics including gender, experiences, different nationalities, and degrees. Each participant shared their viewpoints on the strategies they employed and the experiences they encountered while engaging in remote education, highlighting both their successes and challenges. The analysis involved identifying the significant elements revealed by each group's comments and contrasting and comparing their perspectives. There were 16 respondents (n=16), nine male and seven female respondents. Ten of the respondents were from secondary schools and six were elementary school principals. Twelve respondents resided within the city and four outside the city, broadly representative in terms of personal & school characteristics, they represent certain types of principals. More specifically, there were four participants in each group (4*4), while the researcher moderated each group and took notes. Table 2 indicates the characteristics of the study participants.

Table 2: Characteristics of the Study Participants (n=16)

Participant Characteristic	Frequency
Age	
25-30	5
31-36	7
>37	4
Gender	
Male	9
Female	7
School Level	
Secondary School Principals	10
Elementary School Principals	6

During this data analysis, four themes were defined and classified, from the respondents' responses.

Table 3: Summary of the Themes

	Themes	Sub-themes	Participants	Response Example
	Level of Technology	<ul style="list-style-type: none"> • Impact of pandemic on attitudes toward technology in education. • Navigating the challenges and opportunities • Future of technology in education post-pandemic 	1.1 1.2 1.3 1.4	<i>My search for engaging websites that promoted student cooperation was my main emphasis. Although it was difficult, eventually came across several solutions that let students collaborate on assignments even when they were at home.</i>
2	Communication and Motivation	<ul style="list-style-type: none"> • Role of technology in maintaining communication • Motivating students and maintaining their participation • Communicating through online platforms • Supporting Students 	2.1 2.2 2.3 2.4	<i>Have to change how we communicated when switched to remote learning. Although it was difficult to replicate the dynamics of physical classrooms, video conferencing and internet platforms became indispensable tools.</i>
3	Role and Responsibility of Education Management	<ul style="list-style-type: none"> • Roles of school leaders in virtual learning • Emerging roles in virtual learning • Foreseeing the roles of school leaders evolving post-pandemic 	3.1 3.2 3.3 3.4	<i>It took a lot of work, and a supportive school atmosphere was difficult while balancing the demand for more digital integration.</i>
4	Opportunities associated with remote Learning Platforms Future Strategic Planning	<ul style="list-style-type: none"> • School management and strategic goals • Plans to address potential challenges in achieving these goals 	4.1 4.2 4.3 4.4	<i>One of our long-term objectives is to build a strong feeling of community online. We want to create recurring online events, organizations, and group projects that keep students connected and engaged even while they are studying afar.</i>

5.1 Level of Technology

The first main theme of the thematic analysis is the level of technology which is further divided into three sub themes. These themes include.

- The impact of pandemic on attitudes toward technology in education
- Navigating the challenges and opportunities
- Future of technology in education post-pandemic

The impact of pandemic on attitudes toward technology in education

The first sub-theme includes the responses of four participants including 1.1, 1.2, 1.3 and 1.4. The replies given by the participants provide insights into how the pandemic has affected principals' attitudes towards using technology in education. The collective experiences show a change away from seeing technology as an add-on tool and towards realising its critical role in fostering engagement, accessibility and learning continuity. This shows a change in attitudes, for instance, the teachers adapted to technology-based learning.

The viewpoint of **Participant 1.1** highlights a greater understanding of the importance of technology in sustaining uninterrupted education.

“Well, I believe, technology's role has had to be re-evaluated from supplemental to foundational because of the epidemic, with a focus on how important it is for promoting lifelong learning”.

Participant 1.2, mentioned that.

“I believe technology is a need rather than a choice, it is because technology allows us to communicate and utilise the different learning sources as an educational need”

Both respondents support a more adaptable approach to technology integration while acknowledging technology's ability to reduce disruptions, while demonstrating an enthusiastic stance towards technology.

Participant 1.3's differed as they believe distance learning cannot allow face-to-face experimentations and learning activities:

“There were initial concerns regarding the effects of technology, particularly concerning practical experiences like online laboratories, which require practical experimentations and

demonstrations''

It can be inferred from the responses that things started to change when they realised that technology might improve classroom learning. This progression is consistent with Focus Group 1, showing a recurrent pattern of uncertainty giving way to acceptance of the advantages of technology.

Participant 1.4's reaction emphasises a reactive approach to technology adoption that was made necessary by the abrupt switch to remote learning. Their point of view stresses technology's critical role in bridging the gap between students and teachers during trying times. This response is in contradiction to participant 1.3 in the previous response.

''According to me the importance of technology is in preserving open discussions and effective communication between students and teachers.''

However, other participants emphasise the educational benefits of technology, indicating a particular influence of technology. Meanwhile, the "necessary at the time" perspective highlights the use of technology as a reactionary measure in response to urgent problems. Conversely, the "will be useful at any time" viewpoint regards technology as an enduring and proactive instrument for enhancing education in many settings.

5. 2 Navigating the challenges and opportunities.

This sub-theme analyses the responses by the principals regarding the challenges and opportunities experienced during the pandemic. This specifically discusses the implementation of the technology and challenges and opportunities associated with it.

As the discussion shifts to managing possibilities and problems during remote learning, emphasis moves to the benefits and challenges associated with the online or digital platforms in the education system.

''Enhanced communication is made possible by digital platforms. The higher participation during the virtual parent-teacher conferences''

Level of Technology: Participant 1.1.

''Meanwhile, it can be stated that the above response supports the integration of technology in the educational systems''

Participant 1.2

Communication and Motivation Role and Responsibility of Education Management:

The utilisation of technology facilitates the enhancement of teacher's communication through the provision of effective channels for the sharing of insights and opinions. This facilitates a more comprehensive understanding among them, resulting in cooperative resolutions that yield advantages for all entities involved.

Moreover, the online learning platforms also provide various learning and communicating platforms for learning purposes.

''For me, the focus on encouraging collaboration and interaction in a virtual setting is consistent with the larger issue of technology-driven engagement and creativity covered by other participant ''

Opportunities associated with remote Learning Platforms Future Strategic Planning:

Participant 1.3

However, it is also anticipated that the online platforms have changed the roles and responsibilities of educators. This is supported by **Participant 1.4** who highlighted the working difficulties encountered while switching to distance learning.

''Overnight, our role in it became very important. We had to provide tools for the teachers and quickly address technical problems. It altered my viewpoint as well; today, I see technology as a way to connect students and instructors, especially during trying times''

This answer advances from the pedagogical ideas raised by the other participants, but it nevertheless emphasises how crucial technological infrastructure is during an emergency.

5.3 Future of technology in education post-pandemic

The continuous and thoughtful incorporation of technology is the consensus among all

participants regarding the future of technology in education following the epidemic.

Participant 1.1 emphasised the significance of strategic integration in learning aspects.

''The implementation of a strategic integration strategy is of paramount importance in educational settings. This is because it facilitates the mutually beneficial alignment of various components, optimising the usage of resources and enhancing the efficacy of the educational process''

Whereas **Participant 1.2** emphasised that

''Maintaining technology dynamism is a crucial strategic method to foster a dynamic learning environment, guaranteeing on-going innovation and engagement to enhance educational results''

The necessity to maintain dynamism in the use of technology is of the effective strategic approaches for fostering a learning environment.....

This point of view is consistent with **Participant 1.3**

''Innovation and engaging learning environments require constant development and innovative advancements in educational techniques, resources, and methods to keep learners engaged and engaged in valuable educational experiences''

As a result of the pandemic, participants' shared opinions and experiences point to a considerable change in attitudes about the use of technology in education. The participants believe that technology has demonstrated its usefulness in supporting continuous learning, boosting engagement, and improving communication, despite early scepticism and problems being common. The contrasts and comparisons highlighted offer understanding of the changing role of technology in education by highlighting shared characteristics and distinctive insights. A planned and balanced approach to technology integration is the general agreement as education systems advance, ensuring that the advantages obtained during the epidemic are successfully exploited for future educational endeavours.

5.4 Communication and motivation

The focus group discussion with principals illustrates many facets of motivation and communication in remote learning. Each participant shares their perspectives on the methods they used and experiences they had while engaging in remote education, highlighting both their achievements and failures. The subthemes of this are as followed.

- Role of technology in maintaining communication
- Motivating students and maintaining their participation
- Communicating through online platforms
- Supporting Students

5. 5. Role of technology in maintaining communication

In the contemporary globalised society, the use of internet platforms, video conferencing, and remote learning has become imperative as fundamental communication mechanisms. Internet platforms function as digital centres for the exchange of information, enabling individuals from many locations to connect and engage in smooth and uninterrupted exchanges. Video conferencing serves to overcome geographical barriers, enabling immediate visual interaction for the purposes of conducting business meetings, fostering cooperation, and establishing personal connections. Remote learning utilises technological advancements to facilitate accessible education, therefore presenting adaptable learning prospects and dismantling conventional obstacles to the acquisition of information. Collectively, these technologies have revolutionised the way individuals engage in communication, acquire knowledge, and cooperate, hence influencing the structure and dynamics of contemporary society and professional environments (Buhalis et al., 2019). This demonstrates how flexible instructors can be in embracing technology to decrease the distance between actual and virtual classrooms. The topic of measuring student engagement and comprehension was brought up by **Participant 2.2**.

''For me motivating teachers to seek feedback and deal with problems proactively''

The responses implied that the virtual setting has a greater demand for interaction tactics.

Participant 2.3 emphasises.

''Well, the value of prearranged online interactions with students, highlighting the relevance of regular communication in developing relationships and offering academic and emotional support''

This is consistent with preserving a sense of belonging and rapport even in an online situation. Meanwhile, the creative usage of multimedia technology was introduced by **Participant 2.4**.

''In my view, virtual platforms have provided a distinct opportunity for the exploration of innovative ideas and concepts. Multimedia techniques were utilised to provide interactive instructional materials, while also venturing into innovative approaches, such as virtual presentations of musical concerts''.

5.6 Motivating students and maintaining their participation.

Student motivation during and post-pandemic plays a key role in engaging them in maintaining their consistency in their studies. For this purpose, teachers must plan accordingly. Extending this, **Participant 2.1** mentioned that.

''Individualisation remains a critical strategy for maintaining student involvement''.

Thus, the response stresses the benefits of conventional learning are replicated by personalising activities and providing feedback. Considering the significance of same aspect, **Participant 2.2** added that

''I would mention that motivational strategies, utilising incentives and entertaining challenges to heighten interest and anticipation''

Participant 2.3's discussion on the importance of collaborative group projects demonstrates the value of teamwork and camaraderie, even in remote learning.

''Collaborative initiatives assumed a prominent position. The collaborative completion of projects by students facilitated the development of collaboration and a shared sense of companionship, even inside the virtual environment''

Participant 2.4 encouraged students to share their creative endeavours online, expanding incentives outside the classroom.

''In addition to their academic pursuits, students were encouraged to utilise online platforms as a means of sharing their artistic endeavours, therefore changing the digital world into a platform for exhibiting their abilities''

This suggests that virtual platforms have been included in a comprehensive learning process. The participants emphasise regularity, little wins celebrations and group participation as additional methods for sustaining student interest and involvement.

5.7 Communicating through online platforms

The importance of regular communication is echoed in the perspectives of the student participants. **Participant 2.1** expressed the need for the impulsiveness of face-to-face interaction.

''Throughout the period of remote learning, our educators upheld a consistent means of contact via video conferencing sessions and electronic mail. I found myself yearning for the immediacy inherent in face-to-face conversations although the technologies proved to be efficacious''

Online platforms have been playing a significant role in promoting discussion for students. In this aspect, it is mentioned by **Participants 2.2, 2.3 and 2.4** respectively..

''For me, online discussion forums and question platforms provide a way of contact, but some students might be reluctant to ask for help online'' (2.2)

''The focus on continuous online contact is in keeping with the demand for routine and connection, even in a virtual setting'' (.2.3)

''The difficulty of real-time communication by outlining the shortcomings of asynchronous communication in responding to urgent questions'' (2.4)

5.8 Supporting Students

Moving to the aspect of student support by the teachers, respondents had a variety of views. Parents' viewpoints provide insight into the methods used to help their students develop. According to **Participant 2.1**,

''The necessity of designating a location for studying and following a daily routine, reflecting the value of organisation in promoting a positive learning environment is part of student motivation''

At the same time, **Participant 2.2's and Participant 2.3's** discussion of success appreciation and celebration are consistent with motivational theories that strongly emphasise positive reinforcement. The perspectives of these participants are different, yet they provide different options for extending support to the students.

''The act of acknowledging and observing gradual accomplishments served as a motivating factor for our youngsters, fostering their dedication to their online educational pursuits''

''I would say that the value of intellectual discourse in fostering academic development and a love of lifelong learning''

The aspect of a support system through online parent communities, as highlighted by **Participant 2.4**, emphasises the collaborative nature of navigating the online learning environment.

''As the educational environment undergoes transformation, it is evident that school leaders are assuming the responsibility of becoming advocates for innovation. They are at the forefront of spearheading the investigation and implementation of novel technology and pedagogical methodologies''

Comparatively, educators as focus group respondents drew attention to the difficulty of replicating the dynamics of real classrooms in a digital environment. Teachers adjust by involving students through technology and creativity, and students enjoy synchronous communication and one-on-one encounters. The respondents emphasise the value of routine, engagement tactics and community development. Moreover, the focus group discussion highlights the multifaceted aspect of online learning, where strong motivation, support, and

communication are essential. Although the approaches and viewpoints of each group vary, they all emphasize the value of flexibility, involvement, and a feeling of community in making virtual education successful.

5.9 Role and Responsibility of Education Management

The discussion for this theme explores the duties and obligations of school principals in the context of online learning, stressing both the modifications that have taken place and the new positions that have become necessary due to the transition to online learning. The participants' viewpoints offer insight into the difficulties and chances that school principals have faced in this changing educational environment. Four sub-themes have been identified.

- Roles of school leaders in remote learning
- Emerging roles in remote learning
- Challenges experienced while fulfilling the new roles.
- Foreseeing the roles of school leaders evolving post-pandemic

5.10 Roles of school leaders in remote learning

Participant 3.1 pointed out a substantial change in the function of school administrators during distance learning.

“The position has grown to include online learning champions to address possible issues and emphasise the advantages of remote learning within communities”

Hence, it can be interpreted that this change in responsibility highlights the necessity for school administrators to promote online understanding actively. The rising importance of educational technology management is emphasised by Participant 3.2.

“I believe school administrators are now responsible for helping teachers choose the right digital resources and smoothly incorporate them into their lessons. This position can expand their current duties in the distance learning environment of curriculum creation and instructional assistance”

Furthermore, it can be implied that school administrators are now data-driven decision-makers who analyse the results of distance learning to modify tactics and interventions in real-time.

Their role's analytical component demonstrates a proactive strategy for enhancing students' achievement in both online and classroom environments.

Participant 3.3 emphasised the critical role that communication plays in remote learning.

''To preserve a feeling of community and a common educational goal, school leaders have taken on the responsibility of encouraging open lines of communication among teachers, students, and parents''

The traditional function of fostering successful communication within a school community has been expanded to address virtual contact difficulties. Some school administrators have also developed and maintained online communities to promote fellowship and a sense of belonging among students and teachers.

The issues of equality and accessibility that have surfaced in the remote learning environment are discussed by **Participant 3.4**.

''School administrators have assumed a crucial role in managing challenges with the digital divide and guaranteeing that all students can access the necessary tools and stable internet connectivity''

Their larger obligations to promote diversity and fair education align with this responsibility. It appears that the school administrators have developed creative methods to close the digital divide, demonstrating flexibility and problem-solving skills.

5.11 Emerging roles in remote learning

The participants agree that assuming these new duties has sometimes been challenging as a result of integrating technology, including online learning platforms and remote learning. As stated by **Participant 3.1**,

''According to my perspective, maintaining a collaborative and encouraging school environment while integrating digital tools can be difficult''.

Nonetheless, it is stressed that the difficulty of preserving constant connection across several internet platforms while preventing information excess was mentioned by

Participants 3.2, 3.3 and 3.4

''Well, we will include instructors in the decision-making process to overcome objections to the introduction of technology. A technology committee is being formed so that teachers can voice their concerns and recommendations''

''The limits of online interactions make it particularly difficult to address the emotional well-being of students and instructors in a virtual context''

''I say that the continued difficulty of ensuring that all pupils have access to technology highlights the necessity for ongoing innovation''

5. 12 The roles of school leaders evolving post-pandemic

Furthermore, the participants predict that the digital skills they learned during the epidemic will have a long-term effect.

Participant 3.1 recommends that

''Mixed-learning models are anticipated to increase in popularity, necessitating consistent support from school administrators to incorporate technology into pedagogy''

Participant 3.2

''The focus on making data-driven decisions suggests a changing role in evidence-based educational management beyond online learning''.

However, a response by **Participant 3.3** indicates that.

''... it is anticipated that encouraging community and connection will continue to be an essential component of student engagement and well-being''

For this purpose, **Participant 3.4** sees a future in which school administrators play the role of innovation advocates, directing the investigation of novel pedagogical approaches and technology innovations to adapt to the evolving state of education.

''As the educational environment undergoes transformation, it is evident that school leaders are assuming the responsibility of becoming advocates for innovation. They are at the forefront

of driving the investigation and implementation of novel technology and pedagogical methodologies ”

The focus group discussion concluded by emphasising the dynamic and changing nature of school leaders' duties in online learning settings. The insights provided by the participants highlight the variety of possibilities and problems that the move to online education presents and the flexible and creative character of good educational management. Beyond the pandemic, school management will be shaped by changes in roles, the introduction of new duties, and the long-lasting effects of online learning skills.

5.13 Future Strategic Planning

The last focus group discussion responded to how remote learning has significantly impacted and the various ways through which strategic goals for schools are developed. The participants' perspectives clearly show how schools adjust their plans to the changing educational landscape. The introduction of new aims and the focus on technology integration, professional growth, community building, and evaluation techniques show how remote learning has had an influence.

5.14 School management and strategic goals

Considering the aspect of distance learning, **Participant 4.1** said

”As I believe that acknowledging flexibility and technology integration as crucial components. Setting up a mixed learning paradigm is an innovative strategy that seeks to combine classroom and online learning effortlessly”

It can be suggested that this strategy guarantees instructional continuity even during disruptions and offers personalised learning opportunities. The focus on adaptation reveals a strategic perspective that emphasises readiness and resilience.

The significance of professional development adapted to digitally improved teaching techniques is further discussed by **Participant 4.2**.

”Recognising the necessity for teachers to be adept at using numerous virtual platforms shows a proactive approach to meeting the demands of contemporary education”

It can be suggested that schools can provide their teachers with the knowledge and abilities they need to engage pupils with digital media successfully by creating a thorough training programme. This strategy shows a dedication to empowering teachers and improving their teaching methods.

Participant 4.3 highlighted

''The significance of maintaining student engagement and connection by putting a significant emphasis on building an online community is essential. ''

Setting up recurrent online gatherings, clubs, and group projects follows the notion that a sense of belonging to a community supports students' motivation and general well-being. It seems that this objective emphasises the development of meaningful interactions inside virtual environments while acknowledging the social and emotional dimensions of learning.

Participant 4.4 emphasises the strategic response to the difficulties presented by remote learning—the adaption of evaluation methodologies.

''For me, the implementation of an enhanced digital assessment system underscores the significance of prompt feedback and data-informed insights pertaining to students' progress''

This objective demonstrates a dedication to using technology to improve the educational experience while integrating evaluation procedures with the practicalities of online learning.

5. 15 Plans to address potential challenges in achieving these goals.

The techniques employed by the participants to deal with probable difficulties provide yet another example of their proactive and realistic attitude to accomplishing their objectives.

Participant 4.1 stressed

''I would say that the need to invest in infrastructure and resources to enable technology integration, acknowledging that successful implementation necessitates cooperation with educational technology specialists that results in better outcomes''

Participant 4.2's assertion that including teachers in decision-making and creating a technology committee shows the necessity of getting educator support and expertise for technology adoption.

''To overcome resistance to the use of technology, we will involve teachers in the decision-making process. A technology committee is being established so that educators can express their worries and suggestions ''

Moreover, the dedication of **Participants 4.3** and **4.4** to continuous development based on student feedback highlights a culture of responsiveness and adaptability.

''Based on the comments received from students, we will consistently enhance our virtual community projects to maintain their level of engagement and significance ''

''Continued training and evaluation improvement shows a dedication to improving practises based on data-driven insights. ''

Despite early distrust and challenges being widespread, the participants think that technology has shown its value in fostering continuous learning, increasing engagement, and facilitating communication. The responses of these respondents vary in terms of recommendations, including investing in infrastructure. Thus, the last discussion concludes by highlighting the transformative influence of remote learning on the strategic goals of school management. A forward looking and flexible approach to education can be seen in the growth of objectives linked to blended learning, technological competence, community building, and assessment innovation. The participants' solutions to problems are by the goals, demonstrating a careful and thorough approach to navigating the changing educational landscape. Thus, the discussions highlight the need for adaptation, flexibility, and technological integration in determining the direction of education.

Chapter 6 Discussion

The purpose of this study is to ascertain the impact of remote learning on education management and its effect on the attitudes of school principals in UAE. The qualitative research analysis identified a number of themes that include: level of technology, communication and motivation, roles and responsibility of education management and opportunities associated with remote learning platforms. The analysis showed that the level of technology in education had changed before and after during lockdown, for instance, the principals from primary school settings did not use the advanced technologies extensively before COVID, but post-COVID, the use of technology has transformed and accelerated ways to communicate, store and transfer data in effective ways. Both genders have shown interest towards the transformation in all fields of technology. Most principals agreed that using general aspects of remote education empower students of all abilities. The principals showed attitudes of flexibility and adaptability to face challenges. Principals still believe that using technology along with teacher-centred approaches facilitates a vital role in basic subjects to fulfil the needs of the students (Al-Karaki et al., 2021).

Technology played a significant role in creating an interface for communication and motivation to support students. Although it was difficult to replicate the dynamics of physical classrooms, video conferencing and internet platforms became indispensable tools. Roles and responsibilities of education management address the potential challenges in achieving goals in school management and in education. It took a lot of work and a supportive school atmosphere which was difficult while balancing the demand for more digital integration. As a result of the opportunities provided by remote learning platforms, one of the long-term goals was to foster a strong sense of community online by organising regular online gatherings, clubs and group projects that kept students engaged. Another goal was to prepare students for learning at various paces and to develop strong stakeholders: students and parents, as well as future employees by teaching them how to use and adapt to technological advancements. To acquire abilities for future digital access, communication with peers, and mastery of fundamental subjects at this age are crucial.

In an aspect of the questionnaire, these are the responses to survey questions.

- The virtual transformation in education had the effect of adopting a professional development plan at the level of my school to develop digital skills for all individuals

in my school.

- The virtual transformation in education had a positive impact on my direction to develop my skills in the field of technology.

In summary, Figure 5 offers insightful information on the many viewpoints on how virtual learning affects the growth of management traits, particularly in light of the future of remote education and educational platforms. Although there was a tendency for agreement among participants, the responses show a wide variety of viewpoints, from steadfast agreement to strongly disagreement.

More than 70% of respondents saw a positive impact in strategic planning and priorities for schools as shown in Figure 6. The specific statement refers to a subject matter that involves expressions of personal beliefs or attitudes. The graphic shows the whole distribution of responses and shows that most respondents agreed (by combining "Strongly Agree" and "Agree" responses). It is important to remember that there are also many opposing and neutral viewpoints present. The multiplicity of viewpoints highlights both the complexity of the issue being examined and the diversity of opinions held by those engaged.

Figure 7 depicted that most of the respondents explained that they agreed that virtual learning has enhanced their skills to cater to the challenges while using only remote learning. This increases the ability of learners to work more effectively on the skills of work and utilise the virtual platform to present it. It is important to note that there are also sizeable proportions of people who keep neutral, disagreeing, and strongly disagreeing perspectives. Data from the questionnaire revealed that a sizable portion of the participants demonstrate agreement, as shown by the combined majority of "Strongly Agree" and "Agree" responses. The variety of responses demonstrates the vast range of opinions people have on the subject covered in the statement.

This research is about remote learning and its impact on the orientation of principals of different schools. In Figure 8 the question statement was related to adoption of different strategies and standard approaches in dealing with new technology. Principals of schools responded that they need different strategies adopted in their schools. According to the statistics, there are varying degrees of agreement among the respondents about the adoption of various tactics and a common strategy to deal with new technologies. The diversity of opinions seen emphasises the wide range of ideas available among the people surveyed, underlining the need for more research to properly understand the underlying factors contributing to the varying levels of

dissent and acceptance.

Most people responded with acceptance of the remote transformation and plan. The analysis of Figure 9 replies yield significant information for customising methods that address the diverse inclinations and concerns of individuals. It is essential to conduct further analysis of the underlying factors that contribute to these varying perspectives to develop an integrated approach that not only recognises divergent viewpoints but also utilises them to cultivate a comprehensive and efficient strategy for professional development in the virtual realm.

Figure 10 elucidated the remote transformation and development of skills in the field of technology and most respondents agreed that it has a positive connection with the objectives aim of the study. The presence of a wide range of viewpoints highlights the intricate nature of the subject matter and the many perspectives through which it is understood. It is important to do a deeper investigation into the underlying factors that contribute to the varying degrees of consensus and divergence. These insights have the potential to enhance the depth of comprehension of the subject matter and provide guidance in efforts to reconcile disparities in knowledge or resolve any apprehensions. The presented data serve as a fundamental basis for engaging in meaningful discussions and doing further investigations, making a valuable contribution to the wider discourse around the topic at hand.

Both Figures 11 and 12 are related to staff motivation and communication by experiencing remote learning. Principals agreed that this has enhanced the motivation of staff and communication way after using virtual learning improved significantly. According to the statistics, virtual learning had a substantial influence on participants, as seen by a considerable increase in the number of responses they provided after interacting with the online learning platform. The current study makes use of a before-and-after analysis as a useful tool for evaluating the effectiveness and impact of virtual learning, hence directing instructional strategies and enabling changes to maximize the overall learning experience.

The first theme level of technology explained that respondents' conversation came to the consideration that there had been a significant shift in views toward the application of technology for learning because of the pandemic, based on their shared perspectives and experiences. As educational institutions develop, there are few constraints that technology integration should take a deliberately prudent approach to ensure that the benefits gained throughout the pandemic are successfully utilised for future educational pursuits.

In contrast, focus group respondents point out how challenging it is to replicate the atmosphere of the real classroom in a digital setting. As per the second theme, communication and motivation, students benefit from synchronous communication and one-on-one interactions, while teachers adapt by integrating students through technology and creativity. The importance of routine, engagement strategies, and community development were stressed by the respondents. The group discussion also emphasised the complexity of online learning and the importance of strong motivation, encouragement, and communication. They all refer to the need for adaptability, participation, and a sense of community for the success of remote education.

It becomes clear that school principals take on the role of innovation champions, overseeing the research of fresh pedagogical methods and technological advancements to accommodate the changing nature of education. The perspectives offered by the participants illustrate the range of opportunities and issues that the transition to online education brings and the adaptable and innovative nature of effective educational management. Beyond the epidemic, shifts in roles, the addition of new responsibilities, and the enduring consequences of remote learning skills will influence school management (Tadesse and Muluye, 2020).

The final session on future strategic planning closed by noting the radical impact that remote education has had on the strategic objectives of school management. The expansion of objectives related to combined learning, technical proficiency, community development and assessment innovation can be considered a sign of a forward-looking and adaptable approach to education (Aldossari and Altalhab, 2022). The responses of the leaders to issues are determined by the objectives, displaying a thorough yet cautious method for navigating the shifting educational landscape. The adaptation of the assessment framework to the virtual learning setting is crucial, as it should incorporate novel evaluation methods that measure, not just academic advancement, but also the cultivation of comprehensive abilities, such as critical thinking and adaptability, hence this research facilitates and attributes an ideology for the educational institutions help them adapt to these changes and learning sustainability.

The recommendations are as follows:

- Educational institutions conscientiously incorporate technology into their courses, employing a well-rounded strategy that considers the benefits of remote learning and the necessity for face-to-face engagement. This strategy should leverage the potential of technology to augment continuous learning, engagement, and communication while upholding the advantages of conventional classroom experiences.

- Educational leaders have to give precedence to the advancement and execution of personalised engagement techniques that foster synchronous communication and individualised interactions. These tactics have the potential to cultivate a sense of regularity, affiliation and drive among learners, successfully establishing a connection between physical and remote learning settings.
- The importance of innovative educational management lies in the proactive engagement of school principals as advocates for innovation, consistently seeking out novel pedagogical approaches and improvements in technology. This involves cultivating a management style that is adaptable and inventive, while also being responsive to the changing educational environments, to effectively navigate the dynamics of remote learning.
- Educational institutions must allocate resources towards implementing comprehensive professional development initiatives, aimed at equipping educators with the necessary skills and abilities to thrive in the realm of remote education. It is recommended that these programme prioritise the cultivation of flexibility, creativity and the proficient utilisation of technology to facilitate an enhanced learning experience.
- It is vital for educational institutions to engage in strategic planning to effectively implement a hybrid learning model that smoothly integrates both remote and in-person components. This entails the establishment of goals that incorporate a combination of learning methodologies, mastery in technical skills, fostering a sense of community, and employing novel ways of evaluation, so offering a full educational experience.
- Educational leaders have to uphold a student-centric approach, placing emphasis on the distinct requirements and preferences of learners in both virtual and physical settings. The success of virtual education may be ensured by the cultivation of a strong feeling of community, flexibility, and active engagement.
- The integration of continuous research and reflective practice is crucial in the context of educational management positions. Management in education necessitates a proactive and well-educated approach, which may be achieved by actively engaging with new educational theories, practices, and technological developments. This engagement enables leaders to make informed judgements and develop effective strategies for educational administration.

- Educational institutions should encourage collaboration among teachers to promote knowledge exchange and best practices in remote education, administrators, and stakeholders. The acceleration of successful virtual learning practices can be facilitated via the active participation in open discourse and the sharing of experiences.
- The adoption of a sustaining strategy to technology deployment is imperative for educational institutions as technology continues to advance. This entails continuous evaluation of technological tools, platforms, and methodologies to ascertain their alignment with educational objectives and their contribution towards achieving long-term educational goals.

Chapter 7 Conclusions

7.1 Summary of Findings

School principals share their experiences of managing remote learning during COVID-19 lockdowns. The qualitative analysis showed that the respondents had good experience with remote learning and enhanced their capabilities, adoption of new technologies, and overcame the challenges associated with remote learning. They thought their management skills improved and positive change happened in strategic planning for schools. Moreover, their communication with school colleagues and in general increased by using remote methods.

The pandemic led to a shift in views on technology's role in learning, with participants recognising its potential to foster continuous learning, engagement, and communication. To ensure lasting benefits from the pandemic experience, educators emphasised the challenges of replicating a real classroom atmosphere in digital settings, while teachers adapt through technology and creativity. School principals play a crucial role as innovation champions, overseeing research on pedagogical methods and technological advancements. Remote education significantly impacts school management, with objectives expanding in blended learning, technical proficiency, community development, and assessment innovation. This forward-looking approach emphasises adaptability, flexibility, and technology integration in navigating the changing educational landscape.

7.2 Dissertation Summary

The first chapter explained how incorporating remote learning into educational institutions had re-shaped the paradigms of educational administration. The background to this study has been rapid technical improvements, boosted by the demands of lockdown, resulting in increased efficiency and understanding of remote learning. Even the UAE, renowned for its quick modernisation and proactive commitment to adopting technological innovations, has seen a paradigm shift in educational practices. The use of online learning in this changing environment has brought possibilities and problems for educators, administrators, and legislators. The main goal of this study was to thoroughly investigate the impact of these changes on the role of the school principals in the UAE.

The literature review discussed remote learning, its success criteria, the function of education management, challenges and possibilities through the exploration of previous research. It concluded that the analysis of remote learning's success characteristics included the crucial role of technological competence and proper training in facilitating a smooth transition to remote

education. Along with the support provided by school principals, pedagogical adaptability and attitude changes were identified as 'crucial' elements that determined the success of remote learning. The effectiveness of remote learning projects largely depends on combining technology and pedagogy. While contact and instructional assistance continued to be crucial elements in promoting engaged and successful learning experiences, cultural concerns emerged as important variables, shaping the design and delivery of remote education.

The literature also highlighted how the role and responsibilities of education management are shifting in the context of remote learning. Investigating the potential difficulties inherent in remote learning revealed a variety of complex processes. The need for pedagogical competency and professional growth to successfully traverse this new educational terrain were among them, as were the technical challenges that educators and students faced processes, such as the need for pedagogical competency and professional growth to successfully traverse this new educational terrain and the technical challenges faced by students and educators. The difficulties extended to curriculum adaptation and grading procedures, demanding novel strategies to preserve academic rigor. It was determined that remote learning held promise for

the future. These observations provided a detailed picture of the interaction between technology, educational administration and the larger educational context.

The methodologies used to investigate the many aspects of the study were detailed in the research methodology section. Mixed methods using a Pragmatist approach method were selected to understand and achieve the aim and objectives of the study. Quantitative analysis offered a formal framework for quantifying attitudes, perceptions, and trends. This method allowed the collection of numerical data using survey and statistical techniques, which helped determine the prevalence and significance of numerous elements related to remote learning. Concurrently, a qualitative investigation explored the subjective perspectives that quantitative data may. The qualitative methodology uncovered underlying motives and a variety of viewpoints through in-depth interviews that expanded the comprehension of the research.

The Pragmatic aspect of the chosen research philosophy made it the perfect prism to explore the intricate relations between theory and practice. The choice of Pragmatism was made for its capacity to combine the benefits of several paradigms, producing a comprehensive and flexible strategy suited to the varied character of the research. School principals were surveyed and interviewed to ascertain their experiences and opinions about the introduction of remote learning during and since COVID. Quantitative research aims for large sample size, whereas qualitative research is more concerned about the depth of insight gained. The combination of quantitative and qualitative methods helped examine a complex subject.

Chapter 4 examined the findings from the survey, and Chapter 5 on the analysis of the focus group transcripts. The respondents' demographics represented a balanced and representative cross-section with various backgrounds and experiences. The distribution of participants' educational levels and the ratio of male to female participants gave a comprehensive perspective, ensuring that all points of view were well represented in focus groups. The COVID lockdown, the brought extraordinary challenges to the educational landscape, mainly resolved by resorting to online learning, became a popular remedy. The statistics showed that most participants felt that their school's strategic planning goals have improved in this age of remote learning. This pattern confirmed that remote learning catalysed improved strategic thinking, evident across people with degrees ranging from PhDs to Bachelors.

This variety reflected the educational environment and made it easier to comprehend the impact of virtual learning at various academic levels. Participants shared a positive feeling regarding the effectiveness of virtual learning in strengthening management abilities, particularly in

anticipating the future of virtual education. This led to improved problem-solving skills and the capacity to use Internet resources, which supported the transition to online modes of operation and administration.

Collectively, the data gave a detailed picture of how remote learning has affected the administration of the educational system, providing important information for strategic planning, skill development, communication, and technology adoption. These empirical findings confirm the transformational power of remote learning and highlight how crucial it is for empowering educational leaders to manage the changing educational landscape. These observations help educational stakeholders make well-informed decisions that align with the needs of contemporary students and the requirements of a constantly changing global environment as education continues to advance.

The participants' discussion on the first theme, "Level of Technology," indicated a transformative change in their perspectives and attitudes regarding integrating technology for learning. The participants' shared experiences confirmed the importance of technology in promoting on-going learning, engagement, and successful communication despite early scepticism and difficulties. The extensiveness and variety of perspectives on this issue shed light on how technology shapes educational landscapes while highlighting the necessity for a deliberate and strategic integration to harness its advantages for future educational endeavours.

On the other hand, the second theme, "Communication and Motivation," focused on the complex dynamics of online learning. Respondents emphasised the difficulties of virtually recreating the atmosphere of a typical classroom. They emphasised the value of personalised encounters, synchronous communication, and engagement tactics. The discussion shed light on how crucial it is to support regularity, creativity, and community building to make virtual education successful. As crucial elements supporting the effectiveness of online education, adaptability, engagement, and the development of a sense of belonging emerged.

The focus group discussion in the third theme clarified that school administrators are crucial as innovation catalysts. Their duties also included adopting cutting-edge technical developments and innovative instructional methods to meet the changing needs of the educational system. The conversation highlighted how flexible educational management is, managing the complexities of online learning settings while changing roles and welcoming innovation. The collected responses comprehensively depicted the transformational duties that educational leaders must undertake in the aftermath of virtual education.

The focus group's last theme, "Future Strategic Planning," highlighted the significant influence that remote learning has had on the strategic goals of educational management. Expanding objectives to include blended learning, technical competency, community development, and creative evaluation methods highlighted an innovative and flexible approach to education. The participants' discussion illustrated what would be a wise and thorough strategy for directing the course of education in the context of evolving educational environments.

The focus group discussion reiterated the need for flexibility, adaptability, and effective technological integration in navigating the educational course. The thoughts presented highlighted the necessity for a well-balanced strategy that uses online learning's advantages while retaining the essential elements of conventional educational dynamics. The many viewpoints highlighted the changing face of educational management, which is characterised by creativity, resiliency, and a dedication to preparing students for a future characterised by radical technological transformation.

The mutually dependent relationship between strategic planning objectives and remote learning became evident in qualitative data collection, which provided evidence that incorporating technology has facilitated effective planning processes. The difficulties faced in the remote learning environment were identified, establishing the framework for investigating the methods used to overcome these difficulties. Adopting professional growth strategies and honing tech-related abilities became essential coping techniques. The results of this study clearly evidence the perspectives and practices of school principals in UAE during COVID pandemic, which adds insights into the challenges, considerations and provide educational leaders with a compass they can use to navigate their institutions towards greatness in education, which is constantly changing.

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Appendix

Survey Questionnaire

Welcome and thank you for your interest in my survey. As a part of my Master thesis, I am conducting a survey regarding The Impact of Distance Learning Platforms on Education Management and its Effecton the Attitudes of School Principals in UAE.

The objective of the is to appraise the impact of remote learning and learning platforms on the orientation and practices of school principals in the UAE

This survey takes approximately 5-8 minutes to complete. Your data is completely protected as it will be collected and analysed anonymously for academic purposes only. I would appreciate taking your time to complete the following survey. If you have any questions about the study, please feel free to contact me.

1. What is your gender? Male Female
2. What is your Level of Education? Diploma Bachelor's degree Post Bachelor Master's Degree PhD
3. Nationality of Respondents UAE Other Arab Others
4. Management Experiences in years 0-5 years 6-10 years

<p>11-15 years</p> <p>16-20 years</p> <p>Above 20</p>
<p>5. The age group of the school in which you work</p> <p>Cycle 1(Grade 1-4)</p> <p>Cycle 2(Grade 5-8)</p> <p>Cycle 3(Grade 9-12)</p>
<p>6. Remote Learning affected my school's strategic planning priorities positively.</p> <p>Strongly agree.</p> <p>Agree</p> <p>Neutral</p> <p>Disagree</p> <p>Strongly disagree</p>
<p>7. Remote learning enhanced my management skills in identifying learning challenges</p> <p>Strongly agree.</p> <p>Agree</p> <p>Neutral</p> <p>Disagree</p> <p>Strongly disagree</p>
<p>8. Remote learning enhanced my management skills in foreseeing the future of Remote learning and learning platforms</p> <p>Agree</p> <p>Neutral</p> <p>Disagree</p> <p>Strongly disagree</p>
<p>9. Remote learning enhanced my leadership skills in developing solutions to overcome the</p>

learning challenges.

Agree

Neutral

Disagree

Strongly disagree

10. Remote learning will increase in the Future

Strongly agree.

Agree

Neutral

Disagree

Strongly disagree

11. Schools need to adopt different strategies from the standard approaches to cope up with the new technology.

Strongly agree.

Agree

Neutral

Disagree

Strongly disagree

12. What are the most prominent challenges in the remote transformation and the most prominent solutions you have implemented?

13. The Remote transformation in education had a positive impact on my direction to develop my skills in the field of technology

Agree

Neutral

Disagree

Strongly disagree

14. The Remote transformation in education had the effect of adopting a professional development plan at the level of my school to develop digital skills for all individuals in my school

Strongly agree.

Agree

Neutral

Disagree

Strongly disagree

15. Rearrange the list based on your experience, the most prominent aspects of the technology skills that you acquired in Remote learning

Microsoft new version

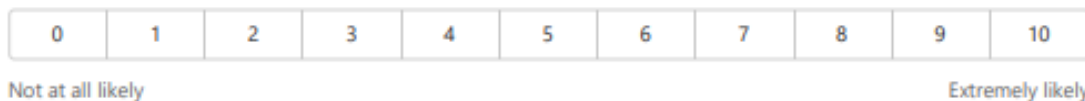
Learning platform

Use cloud storage for files (One drive)

Using online programs meeting life (Teams zoom)

16. What are the new roles have been created by transformation to Remote learning / to do what?

17. Please specify the percentage of communication with teachers based on your experience before remote learning



18. Please specify the percentage of communication with teachers based on your experience after remote learning

0	1	2	3	4	5	6	7	8	9	10
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Not at all likely

Extremely likely

19. Virtual learning contributed to increase all my school staff motivation

Strongly agree.

Agree

Neutral

Disagree

Strongly disagree.

20. Would you like to add any other ideas not addressed in this questionnaire?

21 Would you like to participate in the online focus group interview? Your participation in the interview will be an excellent opportunity to deepen the researcher's understanding of the subject and will significantly affect the quality of the study results. This research will benefit from your knowledge, experience, and wisdom.

Yes

No

Probably