EXPLORING THE EXPERIENCE OF USING THE MADRASATI PLATFORM TO DELIVER INSTRUCTION

by

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To my mother and father

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ABSTRACT

EXPLORING THE EXPERIENCE OF USING THE MADRASATI PLATFORM TO DELIVER INSTRUCTION

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This research explored the impact of the Madrasati platform on the performance and role of high school teachers in Saudi Arabia, with a focus on the Jazan region. Utilizing a mixed-methods approach, the study addressed the key research questions, including the extent of the Madrasati platform contribution to teacher support and its impact on content delivery, communication, evaluation, motivation, autonomy, and knowledge sharing. The research design of this study incorporates both qualitative and quantitative methods. The purpose of using mixed methods was to provide a comprehensive understanding of teacher experiences. The study setting in the Jazan region is characterized by diverse terrain, a growing population, and significant developments in educational infrastructure. The choice of this region allows an in-depth exploration of how the Madrasati Platform aligns with the cultural and educational context. Participants of this study were 333 high school teachers from various disciplines, ensuring a diverse sample for robust statistical analysis. Data collection involved a structured survey with multiple-choice and open-ended questions, addressing demographic information, platform experiences, and suggestions for improvement. The

researcher has followed ethical guidelines, secured approvals from the Institutional Review Board and the Ministry, and emphasized participants' confidentiality. The data analysis was done by using statistical software and qualitative methods to derive meaningful insights into the platform impact. This research contributed to the broader understanding of educational technology in Saudi Arabia, particularly in the context of government initiatives to enhance teaching practices. The findings of this study aimed to inform educational policies and improve the Madrasati Platform, ultimately benefiting high school teachers and students in the Jazan region and in other parts of Saudi Arabia.

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CHAPTER ONE

INTRODUCTION

The COVID-19 pandemic is an ongoing global pandemic of the coronavirus disease and is still spreading because of different variants. The virus which causes the coronavirus disease was identified in Wuhan, China, in December 2019 (Chávez, 2021). Due to lack of knowledge about its mode of transmission, the virus spread to different parts of the world in a short period of time. COVID-19 was declared as a global health pandemic and an issue of public health concern by the World Health Organization (WHO) on January 30, 2020 (Chen, 2020). By May 2022, more than 52 million cases of COVID-19 had been reported globally. In order to prevent the spread of the COVID-19 virus, strict lockdowns were imposed by governments, and all public places were closed to the public for the safety of all. These included schools, universities, banks, offices, parks, markets, shops, shopping malls, cinemas, gyms, etc. This action suspended all social life activities, including learning activities at educational institutions. The COVID-19 pandemic negatively impacted all areas of our lives, including the education sector. Schools, colleges, and universities were also closed for the safety of students and teachers (Alghamdi, 2021). Overall, the COVID-19 pandemic was a challenge and test for checking the effectiveness of our global healthcare, education, and economies, as well as social and political systems.

Few, if any, of the educational systems were built to deal with long-term shutdowns imposed due health concerns, such as COVID-19. The prolonged closure of

educational institutes forced policymakers to redesign educational policies and infrastructures to fill the learning gap created by such broad closures. Online education, also referred to as distance learning, was the first and foremost choice that policymakers pursued to continue instruction during the lockdown because organizing face-to-face classes was not possible due to safety precautions against spread of infection. Online education platforms enabled the students and teachers to connect with each other to continue the learning process. Online education platforms offered the teachers and students virtual classrooms, videoconferencing, chat and messaging features, discussion forums, file sharing, online assessment, and many other facilities which helped them continue the learning processes.

Statement of the Problem

The Saudi Arabian government imposed lockdowns to prevent the spread of COVID-19. Under this lockdown, all schools, colleges, and universities were closed. The impact of school closures was experienced more by high school students than it was in university and college settings because institutions of higher education in Saudi Arabia were using online education platforms before the start of the COVID-19 pandemic (Alghamdi, 2021). The main challenge was setting an online platform for high school students. Therefore, the Saudi Ministry of Education (MOE) launched the Madrasati platform for distance teaching and learning for schools.

The Madrasati platform allowed the students and teachers to continue education process during the COVID-19 pandemic (Aldossry, 2021). The Madrasati platform is an online education platform for providing distant education to children from grades 1 to 12. According to MOE, during 2020-2021 more than 6 million children benefited from the

Madrasati platform. The platform provided teachers and students with unique instruction and learning experiences.

The role and responsibilities of a teacher are different in traditional classroom than in an online classroom. The Madrasati platform and other types of platforms which help teachers and students connect with each other and continue education during the COVID-19 pandemic need to be analyzed for bringing innovation and necessary changes in technological infrastructure. Online educational platforms such as Madrasati provide different types of support and assistance to teachers. Given this, the present research will explore how the Madrasati platform contributed to supporting the performance of the role of the teacher during the pandemic.

Background

The Covid-19 pandemic created many challenges for students, teachers, parents, and school management. Because of precautionary measures, in-person education or traditional education system was impossible to be followed during COVID-19. Preventing infection within the physical classroom was one of the biggest challenges. There was also a shortage of teaching and non-teaching staff in educational institutes when schools were reopened after several months of lockdown (Chen, 2020). This shortage in teaching and non-teaching staff negatively impacted the quality of education of schools, colleges, and universities.

According to Khalil et al. (2020), the fear of being infected by the virus prevented many parents from sending their children to school, thus making it one of the leading causes of lack of attendance in schools. Two out of five parents did not agree with sending their children back to school because of fear of COVID-19 infection (Khalil et

al., 2020). Before the development of COVID-19 vaccines, parents, students, and teachers were worried about coronavirus infection. This aspect also negatively impacted the process of education and performance of in-person classrooms. Maintaining social distance and teaching preventive measures to young children was another challenge raised by COVID-19 for educational institutions (Chávez, 2021). Furthermore, training of teachers and implementing safety measures in physical classrooms was also costly for schools, colleges and universities.

During this hard time, online education helped to combat the negative impact of COVID-19 on education because nations continued the process of education through online education during the pandemic. According to Song et al. (2020), COVID-19 has changed the concept of education for forever and has taught all concerned the importance of online education. In 2020, more than 1.3 billion children were out of schools due to COVID-19 when the lockdown was imposed by governments (Song et al., 2020). Online educational platforms helped schools and the huge population of children stay connected in the learning process.

The COVID-19 pandemic caused an increase in overall usage of tools and platforms related to online education. According to Chávez (2021), about 68% of educational institutions in the United States used different online education platforms as tools for continuing the learning processes (Chávez, 2021). Recent studies have reported an increase in demand for online learning software, virtual tutoring tools, language apps, and video conferencing since the start of the pandemic. In fact, the market for online education will reach up to $350 billion by 2025 (Chávez, 2021). Also, according to Song

et al. (2020), the COVID-19 pandemic accelerated the demand for online education by 67% at the global level (Song et al., 2020).

Just like other countries, Saudi Arabia also faced an increase in the use of online education during the COVID-19 pandemic (Khalil et al. 2020). Most of the schools and colleges were closed in lockdown, and online education was the only option for educational institutions to continue with learning processes. About six million children were out of physical classrooms because of the closure of schools during the early days of COVID-19. In order to solve this problem, MOE announced the availability as well as use of online classes for all types of high schools, colleges and universities. About 98% of Saudi students enrolled in the Madrasati platform-- the local online learning platform of Saudi Arabia (Aldossry, 2021). Saudi Arabia also witnessed an increase in demand for online education contents since the start of the pandemic (Khalil et al., 2020). Currently, most of the schools have been reopened in Saudi Arabia for physical classes but are still using blended learning because online education has been announced as part of the education policy by MOE.

More than six million children have used the Madrasati platform. Online education is becoming an important requirement, and its demand will also increase in the future. That is why more students and teachers will use the Madrasati platform as it will play an important role for teachers and high school students' classes in the future, too. Per the Ministry of Education of Saudi Arabia, high schools will continue to use the Madrasati platform in the future as it will be a permanent part of the high school education system (Aldossry, 2021).

All types of online education platforms, including the Madrasati platform, offer different types of assistance and support to teachers. Less research work has been done to analyze the effectiveness of the Madrasati platform during the COVID-19 pandemic. Furthermore, the Madrasati platform was a new tool for high school teachers and students. They might have faced different types of challenges and problems while using the Madrasati platform; thus, there is a need to do research work to identify those challenges and problems so that necessary measures can be taken to improve the structure, design, and working mechanism of the Madrasati platform.

Research Methods

This study employed a mixed methods research design, incorporating both quantitative and qualitative research methods to address the specific research questions. The utilization of a mixed methods approach was deemed appropriate as it allowed for a comprehensive exploration of the topic at hand. Qualitative data collection methods, such as open-ended survey questions, were employed to delve into teachers' experiences and perspectives, enabling the identification of significant themes and patterns. These qualitative insights shed light on the impact of the Madrasati platform on teacher performance, roles, and potential challenges. On the other hand, quantitative data collection methods, including close-ended survey items, were used to quantitatively measure the impact of the platform on teachers' self-reported performance. The quantitative data collected were subjected to statistical analysis, employing regression analysis to establish the relationship between the Madrasati platform and teacher performance. By employing a mixed methods research design, this study provided a more comprehensive understanding of the impact of the Madrasati platform; qualitative data

offered in-depth descriptions and insights, while quantitative data provided objective measures. By combining the results from data collection methods, a more holistic and nuanced understanding of the research questions was achieved.

A qualitative research method is concerned with collection and analysis of non-numerical data. This type of research method in which results are obtained not by using quantification methods is called qualitative (Starman, 2013). The objective of a qualitative research method is to understand and analyze experiences, opinions, and concepts (LaMarre & Chamberlain, 2022). Qualitative research is a type of research methodology in which open-ended and conversational communication is used to collect data. This research method is mostly utilized in a situation when there is a need to find the answer to “what” and "why" an individual or group of individuals thinks about a concept, phenomenon, or social problem, etc. (Morgan, 2017). The word "naturalistic" inquiry is used to refer to qualitative research methodology. The quantitative research method can be described as a type of research method in which numerical data is collected and analyzed by a researcher to find out the relationship between different kinds of variables (Morgan, 2017). This approach helps the researcher find answers to research questions in the form of numerical data. It can be defined as a systematic investigation of a process, fact, or phenomenon by collection and analysis of quantitative data (Cleland, 2015).

Online Education in Saudi Arabia

Online Classroom

There are different ways to define an online classroom. According to Scheg (2014), an online classroom is a type of classroom which has an Internet-based

educational environment that enables educators (i.e. teachers) and learners (i.e. students) to communicate via the Internet in real time. Many online courses are designed to allow students to learn at their own pace and choose their preferred study time. However, some courses have a prescribed schedule that requires students to be present at specific times to fully benefit from the course.

The Saudi Arabian government has continued to focus on modernization in all areas of life, including education. Initiatives for distance education were taken time by time to promote the concept of remote learning. First, a distance-learning program was offered by Al-Imam University in 1954. Al-Imam University offered many types of correspondence distance learning courses related to Arabic, English, literature, and vocational training courses.

In 1987, most of the distance learning courses were suspended by Al-Imam University due to a lack of students, increase in students' dropout rates, and poor student achievement (Walabe & Luppicini, 2020). King Abdulaziz University, one of the most esteemed universities in Saudi Arabia, pursued the idea of distance-learning in 1972 by offering courses related to fine arts, language, and business administration. In order to promote distance learning, a separate department for distance education was established by King Abdulaziz University in 2002 (Alshathri & Male, 2020).

Due to the increasing importance of distance education and simultaneous demand for correspondence courses, the Saudi Arabian Ministry of Education began paying greater attention to distance education. In 2008, the National Center for e-learning (NCeL) and Distance Education was established by the government (Alshathri & Male, 2020). The purpose of this National Center was to establish laws and principles related to

online education; provide support to schools, colleges, and universities' online formats; and to encourage the concept of online education at the national level. The Saudi Electronic University, established in 2011, is in Riyadh, and provides online education in different fields including health sciences, finance, business, computer education, and banking (Walabe & Luppicini, 2020).

Many sub-campuses were established by the Saudi Electronic University in various cities of Saudi Arabia to promote accessibility to online education. After 2012, MOE and NCeL launched many initiatives related to online education, such as the concept of blended learning (traditional and online education) at high schools, colleges, and universities (Alshathri & Male, 2020). The Saudi Arabian government invested heavily in areas of health and education in its 9th and 10th development plans (2010 to 2019); online education was also focused on in these development plans (Walabe & Luppicini, 2020).

The Madrasati Platform

The Madrasati platform is an online education platform created by MOE for high school teachers and students (Alubthane, 2021). All high schools were ordered by MOE to teach students through the Madrasati platform for seven weeks, but later schools were ordered to use this online education platform until further notice. The Madrasati platform is a type of online education platform through which students and teachers can interact with each other for teaching and learning processes (Aldossry, 2021). The Madrasati platform is used by students and teachers from grade one to the high school level. Just like any online education platform, the Madrasati platform provides high school teachers with all the tools necessary for curriculum development, evaluation of students' learning

process, communication with students, virtual lectures, and the proctoring of exams (Alubthane, 2021).

By using Madrasati, high school students receive access to their course materials and online audio and video lectures, communicate with other students and their teachers, submit online assignments, and take online exams. Students and teachers can also meet virtually at a planned time. More than 45,000 electronic lectures and more than 450,000 digital lesson plans are available via the Madrasati platform (Alubthane, 2021). Furthermore, students and teachers can access millions of electronic books. Tools related to educational planning and design of education-related activities are also available for teachers on the Madrasati platform. By the end of 2020, there were more than 489 million visitors to the Madrasati platform. More than 2.5 million electronic tests and 15 million pieces of homework have been submitted to date (Aldossry, 2021).

Research Questions

This research study will seek answers to the following main research question:

- To what extent has the Madrasati platform contributed to support the performance and role of teachers in high school?

The sub questions of this research study include:

- To what extent has the Madrasati platform impacted the teachers' experiences when delivering content, communicating, evaluating, and motivating students?
- To what extent has the Madrasati platform impacted the teachers' experiences when focusing on students' autonomy and sharing knowledge?
- To what extent were the features of the Madrasati platform challenging for teachers regarding knowledge sharing and student autonomy?

Significance of the Study

The results of this research will highlight the positive and negative impacts of distance learning via the Madrasati platform in online education of high school students and its impact on the role of teachers. The epistemological assumption of this study is that the Madrasati platform has played a positive role and has helped teachers improve their performance during the COVID-19 pandemic. This study will examine different aspects of online education, such as content delivery, communication with students and students' evaluation by teachers through Madrasati. Furthermore, the study will also investigate the challenges that were faced by teachers while using the platform. Overall, this study will explore the impact of the Madrasati platform on knowledge sharing and students' autonomy, which are important aspects of online education.

Online education is an important learning method for all types of students. Most educational institutions in developed as well as developing countries are paying attention to the involvement of online education in different classrooms, especially in high school settings. The COVID-19 pandemic increased focus on the importance of online education. Online education systems were extensively used during this time of pandemic, and during lockdowns students and teachers were left with no option to learn other than through remote forums. In the future, there will continue to be an ongoing focus on online education, and it is likely that high school students will learn more through online platforms over time. Consequently, research that explores the challenges and problems associated with online education is imperative. This research is a step toward better understanding the problems and challenges associated with online education, which will continue to be relevant in the future.

The Madrasati platform is a virtual/online platform for high school teachers and students. The Madrasati platform was launched by the Ministry of Education of Saudi Arabia with short planning during the COVID-19 pandemic. The Madrasati platform has different types of features that support the teachers in teaching courses. This study aims to explore the characteristics of the Madrasati platform which assist the teachers and students of high schools. Mainly, this study will investigate to what extent the Madrasati platform contributed to support the performance and role teachers in high school. There are also many problems that teachers may have faced while teaching high school students through the Madrasati platform. There is a need to conduct research to identify the features of the Madrasati platform in learning. Furthermore, high school students and teachers will continue to use the Madrasati platform in the future, too. Different types of new features and facilities could be added to the design and structure of the Madrasati platform to make online learning more effective.

These results will be helpful because they can help inform educators about the benefits and drawbacks of similar remote learning platforms and provide an extensive overview of Madrasati platform features. Additionally, this study will also provide a list of recommendations to improve the design and structure of the Madrasati platform. The implementation of recommendations will improve teacher performance as well as the instruction of high school students via the Madrasati platform. Additionally, the results of this study will also provide policy makers with the needs and demands of online learning of high school students and teachers. Finally, this research will provide evidence about how the Madrasati platform helped teachers to play various roles during the COVID-19 pandemic and what other things they need to improve their roles. In so doing so, this

study will fill the current gap that is present in high school level education regarding online learning.

CHAPTER TWO
THEORETICAL FRAMEWORK AND LITERATURE REVIEW

The Concept of Teaching Quality

Teaching quality refers to the collection of approaches and skills that help students improve their learning. Quality teaching has a direct impact on students' academic performance, values, skills, and professional success after completing their education. Quality teaching emphasizes different factors, including increase in level of understanding, critical thinking skills, and level of engagement of students. The current education system and policies are putting too much emphasis on the improvement of teaching quality at educational institutions. With regard to educational policies set by state and federal governments, a quality teacher is one who has standard education (bachelor or master's degree), has a certificate or license, and shows good subject area competencies (Grayson, 2009).

There are different elements that contribute to the assessment of teaching quality, such as the ability to establish trust and positive relationships with students, knowledge about students, subject matter expertise, and professionalism. According to Wilson and Peterson (2006), teaching quality which is also known as competency-based education is related to developing innovative and critical thinking skills in students. Many research studies consider an effective teacher synonymous with a quality one (Wilson & Peterson, 2006). According to Kaplan and Madjar (2017), there are different elements that indicate the quality of a teacher or teaching quality, and the most common elements include: the ability of a teacher to develop trust and positive relationships with students, the

knowledge a teacher has about students, and subject matter knowledge of teacher and professionalism.

Teaching which enables students to acquire and create new knowledge is also referred to as quality teaching. The criteria of teaching quality change with the change in nature of learners and set goals. Attributes of quality teaching also change with the change in learning levels. At the high school level, researchers have connected problem-solving, communication, critical thinking, teamwork, collaboration, imagination and technology literacy as components of quality teaching (Wilson & Peterson, 2006). A teacher is considered a quality teacher if he is able to improve all of these skills of students.

Theory of Constructivism and Quality Teaching

The theory of constructivism which was developed by Vygotsky (1978) is a theory related to quality teaching and improved learning. Jerome Bruner and John Dewey also presented their theories which are based on constructivism. Per constructivism, quality teaching occurs when a teacher involves students in activities that require them to reconcile information received in classroom (both online and in the traditional classroom) with their already existing knowledge. In constructivism, quality teaching occurs when students interact with individuals who are more knowledgeable than themselves (i.e. their own knowledge level) (Chan, 2010). Thus, in view of constructivism, teachers with good subject knowledge can deliver quality teaching.

The theory of constructivism also considers interpretation and creation as other elements of effective learning. In this regard, quality teaching occurs when a teacher adapts strategies that enhance students' knowledge creation (critical thinking) and

interpretation of learned knowledge. According to the theory of constructivism, knowledge constructs are based on one's own experiences (Jia, 2010). Knowledge construction occurs when a teacher sets activities for students to solve specific problems and to accomplish goals.

Interaction between ideas and experiences improves knowledge gained by students. That is why, in view of constructivism, quality teaching is when a teacher only acts as guide and facilitator for students and encourages them to create the meaning of things by themselves. Furthermore, quality teaching occurs when teachers post problems for students, provide guidance for experimenting with things, set a framework of immediate feedback, and make sure that all students participate in a problem-solving process (Jia, 2010).

The theory of constructivism supports the idea of using online platforms as a tool to improve teaching quality because through online platforms teachers assign students with problem-solving activities and ask them to solve problems by using their prior knowledge as well as other resources. At the high school level, students have good hands-on use of technologies to gain access to other sources of information to solve assigned problems, and they can communicate easily with their instructor. Accordingly, quality of teaching in view of constructivism improves when a teacher teaches through online platforms (Chan, 2010).

The integration of constructivism and technology in the learning process leads to long-term enhancements in teaching quality and effective learning outcomes. According to Jia (2010), constructivism and fusion of technologies in the learning process bring long-term improvements in teaching quality and effective learning. Online courses

developed with ideas of constructivism cause an improvement in students' academic performance, critical thinking skills, and teamwork which are important attributes of quality teaching (Jia, 2010). Reflection, higher order thinking, and presentation skills also improve when high school teachers construct their online courses using constructivism. Different studies have also reported an improvement in the writing skills of high school students of online courses based on ideas of constructivism.

According to the theory of constructivism, quality of online teaching improves when a teacher designs an online course based on five principles. The first principle is posing problems for students that match better with real life problems. The second principle is structuring learning around a primary concept and allowing students to explore the subject matter by themselves (Chan, 2010). To improve quality of teaching, the third principle of the theory of constructivism is that a teacher should seek and value learners' views and opinions. Online discussion, web chats, emails, and video conferences are different elements of online education that are supportive of this principle. The fourth principle for improving quality of teaching through designing online course on ideas of constructivism is adopting a curriculum that addresses learners' suppositions. This is possible when a teacher analyzes the learners and sets learning contents and activities based on the analysis of the learners (Jia, 2010). Setting a framework of additional support for students who need individual help to construct knowledge is another way to fulfill this principle (Chan, 2010). Using different methods of assessments to check student learning is the fifth principle of constructivism to improve quality of teaching (online teaching). According to Singh et al., (2020), an online teacher teaching a course designed on constructivism should avoid using a single

method of assessment and should keep in view all activities of students. Online platforms enable teachers to allocate points for each online activity related to a course. This is one reason why online platforms enable high school teachers to fulfill all principles of constructivism to improve their teaching (Ramírez-Hurtado et al., 2021). Immediate feedback is an important requirement for knowledge construction, but in online education, immediate feedback could be delayed when a student or teacher is offline (Singh et al., 2020). Furthermore, immediate feedback is faster and more responsive in a traditional (face-to-face) classroom.

Transformational Learning Theory and Quality Teaching

Transformational learning theory was developed by Jack Mezirow. Transformational theory focuses on the learning of young adults (i.e. high school) and adults (i.e. adult education). Many researchers use transformational theory to analyze teaching methods and strategies in high school. The theory of transformational learning states that students show a tendency of adjusting or assimilating their thinking based on new knowledge. Per Mezirow, young students draw from their childhood experiences and transform their beliefs to developed priorities of their learning at the adult stage (Slavich & Zimbardo, 2012). This theory states that a teacher involves young students in an effective learning process by allowing students to question their own feelings, beliefs, and assumptions. According to Slavich and Zimbardo (2012), transformational teaching occurs when a teacher focuses on building a dynamic relationship with students and equips them with a shared body of knowledge to promote their learning (Slavich & Zimbardo, 2012).

In view of transformational theory, teaching quality improves when a teacher acts as a coach and makes groups of students and both teacher and groups of students collaborate with each other to master a body of knowledge. Furthermore, this theory holds that teaching quality also improves when a teacher puts himself in the role of traditional teacher but keeps in view building a positive attitude in students towards learning (Slavich & Zimbardo, 2012). In doing so, a teacher also needs to ensure there are a shared vision of course content, course goals, a model for mastering knowledge and personalized feedback, and attention for students.

There are other different attributes or elements of good quality teaching in transformational learning theory, such as a teacher improving problem-solving skills of high school students and increasing scientific thinking in students. Furthermore, bringing change in habitual perspectives of students is another requirement of good quality teaching (Wilson & Peterson, 2006). The use of online platforms enables students to change their perspective and beliefs and gain new concepts. Through online courses, teachers encourage and guide students to master a body of knowledge (Slavich & Zimbardo, 2012). Thus, teaching through online platforms helps teachers to incorporate all attributes of good quality teaching described by transformational learning theory.

Transactional-Distance Theory and Teaching Quality

Michael G. Moore developed transactional distance theory in the 1970s. Transactional distance theory is one of the first theories that was derived from analysis of teaching practices and learning with the use of technology. Transactional distance theory provides a base to frame experiments and analyze different teaching and support activities. According to transactional distance theory, online education is a type of

pedagogical concept. Separation of students and learners in distance or online education impacts both teachers as well as students (Moore, 1997). Instructional distance in online education is psychological, and there is communication space between teacher and learners. Transaction distance between students and teachers also exists in a traditional classroom setting (Falloon, 2011). However, it is the transactional distance that forces teachers and learners to adopt different strategies and behaviors to teach and learn in distance (online) education. Moore has described the transactional distance as communicative and psychological space between teacher and students that occurs in a planned learning situation.

Dialogue, structure, and learner autonomy are three variables that directly impact transactional distance. According to Moore, dialogue between teacher and learners improves or changes with change in communication media, so the more the dialogue, the less the transactional distance, and the more effective the learning will be. In this sense, transactional distance theory says that the quality of teaching in online education improves when a teacher focuses on decreasing transactional distance with students by manipulating the communication media (Singh et al., 2020). The communication media that allow only one-way communication, such as recorded online lectures, videos, audio recording, or learning (by the individual student) via reading a book or article are some media communication frameworks which cannot effectively reduce transactional distance. Teaching quality is reduced when a teacher uses one-way media communication frameworks. Transactional distance is reduced when there is two-way communication media in teaching strategies, such as email, online classroom, online classes and

discussion boards where a teacher responds to students' questions and inquiries and also provides feedback (Falloon, 2011).

Transaction distance theory also considers frequency and opportunity of communication between teachers and students as quality determinants of online teaching (Moore, 1997). Teaching quality improves when teachers communicate frequently with students and each other over a long period of time. Program structure is another important factor that determines teaching quality in view of transactional distance theory. Program structure is related to the rigidity or flexibility of teaching strategies, assessment methods, objectives of courses, and mediated messages. Program structure is also associated with response to an accommodation of learners individual learning needs. This program structure which is more flexible in nature results in effective student learning and thus causes an increase in teaching quality and teacher development (Moore, 1997). On the other hand, a high level of rigidity in program structure negatively impacts teaching quality because teachers provide fewer accommodations and responses to students' unique learning needs.

Learner autonomy is another important element that directly impacts teaching quality in transactional distance theory. Accordingly, learner autonomy is about the extent to which the learner is in a teaching-learning relationship. When the teacher gives value to learners' attitudes, opinions, and goals, the program structure is considered as a high learner autonomous program. According to Falloon (2011), effective learning outcomes are obtained when a teacher sets high levels of learner autonomy. Transactional distance theory emphasizes that teachers can increase teaching quality and improve their professional development by increasing learner autonomy and decreasing transactional

distance (Falloon, 2011). Recent research studies have indicated that integration of different theories is the best possible solution to improve teaching quality. Integration of different theories can enable teachers to facilitate deep learning along with surface learning.

The History of Online Education

Online education encompasses various descriptions, such as learning through computers and the Internet, electronically supported learning, and a flexible instruction delivery system that enables distance learning and teaching by allowing students and teachers to interact and access course materials remotely.

According to Picciano (2018), online education is a broad term and can be described in different ways. It is a type of education system in which students learn by using their computers (or laptops) and the Internet. Online education or web-based learning can also be described as electronically supported learning in which teachers and students connect with each other for the process of learning through the Internet and computers. The type of learning system in which distribution of material and interaction between students and teachers occurs through Internet-facilitated devices is called online education.

According to Scheg (2014), distance learning and distance teaching are two core elements of online education or distance learning. Online education or distance learning or online education can also be described as a flexible instruction delivery system in which learning is supported by the Internet. In an online education system, students and teachers can gain access to course materials, read books, and submit assignments by using their computers, laptops, smartphones, etc., via the Internet (Scheg, 2014). Physical

separation between students and teachers is considered a basic feature that differentiates online education from traditional or non-online education.

Correspondence schools in the 19th century were considered pioneers in the formation of distance learning. During the 19th century in the United States, religious correspondence schools were established because of geographical isolation between schools and dispersed religious congregations (Anderson & Simpson, 2012). According to Picciano (2018), Chautauqua Lake Sunday School Assembly was established in 1875 as a religious correspondence school to provide education to teachers and church workers. With the passage of time, nonreligious courses were also offered for home reading by different correspondence schools. The idea of correspondence courses flourished, and government, industry, and military institutions began many types of correspondence courses as part of distance learning programs (Picciano, 2018).

The historical development of distance education through various mediums, such as mail-order courses, radio-based programs, and television, has significantly shaped the educational landscape. Per a study conducted by Vivolo (2016) during the mid-19th century, mail-order courses were offered in Europe by the Society of Modern Languages in Berlin. In the United States, the Strayer Business College of Baltimore was established in 1892 and was the first educational institution that offered correspondence courses to businessmen and individuals related to the government.

At the end of the 19th century, the University of Chicago was most famous institution offering a long list of correspondence courses in different areas. Additionally, World War I played a vital role in reshaping the educational system because many universities started their radio-based educational programs by establishing their own

radio stations (Vivolo, 2016). By the end of 1936, there were more than 200 university-owned radio stations in the United States that were working to promote distance education for adults and especially women (Picciano, 2018). In the United States, distance education by use of television started in the 1950s. The University of Iowa was the first American university to launch an instructional television course.

The advent of television, the Internet, and personal computers revolutionized distance education with significant milestones including the introduction of television-based courses, computer-based systems like PLATO, Electronic University Networks (EUN), and the establishment of the first fully online university. According to Anderson and Simpson (2012), by the end of 1950s most of the community colleges in the United States started to offer television-based courses across the nation.

After television, the Internet and personal computers were the main technologies that reshaped the idea of distance education. In 1960, the University of Illinois introduced PLATO which was the first computer and Internet-based course for students. Before launching PLATO, the University of Illinois created its own online system for students (Anderson & Simpson, 2012). Through this system, many computers were interlinked with each other for students to have access to course materials and recorded lectures. Before the invention of the World Wide Web, Electronic University Networks (EUN) ware developed for colleges and universities to help them offer online courses. The first electronic classroom was launched in 1985 by Nova Southeastern University (Vivolo, 2016). The University of Phoenix was the first completely online university to offer online undergraduate and master's level programs in 1989 (Scheg, 2014).

Advancement in computer and Internet technologies during the 21st century caused an increase in popularity and importance of online education at the global level. The availability of high-speed Internet, advanced computers and laptops, and integration of artificial intelligence (AI) in online education are important factors that enhanced the growth of the online education industry. According to Lu (2020), the worldwide market of online education generated nearly $188 billion during 2019. Demand and utilization of online education has increased by 400% in the last six years and is continuously increasing at the present time. The online education industry has expanded to developing countries as well. Due to this, the literacy rate has increased in developing countries (Lu, 2020).

Additionally, per Chávez (2021), online education is playing an important role in the growth and development of developing nations because online education is affordable and fast. Students and educational institutions have to expend fewer economic resources for online education as compared to traditional classrooms. In the future, there will be an increase in the demand of online education, and online education will play a major role in solving social, political, economic, and environmental problems of both developing as well as developed countries (Chávez, 2021).

According to Zawya (2021), UNESCO reported that the Madrasati platform is one of the most globally innovative educational models. UNESCO further stated that during the COVID-19 pandemic, the government of Saudi Arabia also took other steps, such as offering satellite broadcasting school, and the iEN Enrichment Portal to assist online learning processes. The establishment of the Madrasati platform played an important role

in assisting and improving the quality of online learning during the pandemic of COVID-19 (*The Zawya*, 2021).

Effective Online Teaching and Related Factors

Effective online teaching is a broad concept which has been extensively researched because the scope of online teaching is increasing day by day. Effective online teaching can be described as online teaching which brings improvement in student outcomes. Effective online teaching is about using different instructional strategies by keeping in view available technology, learning needs of students, and content (learning material). Some researchers describe effective online teaching as a collection of all activities that promote real learning (Roddy et al., 2017). Effective online teaching is a process in which the online instructor utilizes all available resources to improve the growth and development of students and enable them to connect their learning with the real world (Tan, 2022).

Several studies have highlighted the importance of course activity patterns, flexibility in online learning, and the role of support from school administration and policymakers. Tanis (2020) conducted a study to explore the importance of the seven principles of online learning. The research collected data through an online survey distributed to faculty and alumni of a large university in the United States. The survey included both open- and close-ended questions to gather both quantitative and qualitative data on participants' perspectives on the importance of each principle.

According to the findings of this study, establishing patterns of course activities help make online teaching effective. Online classrooms have great flexibility regarding time and location. In an online course, a student can learn by logging in from any place at

any time. This seems very useful and is one of the most important reasons for the increased popularity of online education. The study also explored that strong support from school administration and policy makers enables teachers to implement all principles of effective teaching.

A well-established pattern of course activities can alleviate stress and frustration in young learners, leading to improved learning abilities. Teachers' expertise in the technologies used in online courses also has a positive impact that fostera positive learning attitudes and academic outcomes in students. The study conducted by Van Wart et al. (2020) aimed to identify the key factors that influence students' perceptions of online learning. They found that mostly high school students face challenges of time management and discipline in online courses because of too much flexibility in the online courses. A well-established pattern of course activities also reduces stress and frustration in young learners which directly improves their learning abilities. Thus, teachers need to establish patterns of course activities and communicate them clearly to make online teaching more effective. Van Wart et al.'s study also found that a teacher with good expertise in the technologies used in an online course brings out positive learning attitudes and academic outcomes in students.

Effective teaching is a collaborative process that involves different stakeholders. Different theories define effective teaching as a journey and not a destination because in order to effectively teach, teachers experience different types of challenges and are constantly expanding their teaching strategies. In this way, effective online teaching is when teachers overcome their challenges regarding improving student learning by adjusting and expanding their teaching strategies.

Regarding effective online teaching, research studies have revealed that there is a positive correlation between clear teaching, diversified teaching, task orientation, and guidance of student engagement with knowledge transfer, along with the significance of online learning platforms and timely responses from online teachers. These features of online teaching underscore the importance of effective communication and instructional practices in promoting student academic performance and motivation (Tan, 2022). Tan conducted his study with the aims of exploring the influence of effective teaching behavior of teachers on the knowledge transfer to students in online teaching. The study found that the questionnaire designed for the research had good reliability and validity, with a general Cronbach's α of 0.796 and KMO values of 0.820. Clear teaching, diversified teaching, task orientation, and guidance of student engagement were all found to have positive correlations with knowledge transfer; diversified teaching, task orientation, and guidance of student engagement also had a significant impact on promoting knowledge transfer. The Kruskal-Wallis test statistics revealed that online learning platforms had a significant effect on knowledge transfer at a 0.05 level. This study reveals that students want a quick and timely response from their online teachers because of the advancement in communication technologies as most people online use instant messaging communication technologies. Late responses from online instructors have proven detrimental for students' academic performance and motivation towards the learning process.

Effective online teaching is also associated with improvement in students' critical and problem-solving skills. According to Cheung and Cable (2017), the aim of both online and offline teaching is to bring positive outcomes in students. Improvement in

developing critical thinking and problem-solving skills is the more desirable outcome (Cheung &Cable, 2017). Designing online course activities and contents in such a way that they improve students' problem-solving and critical thinking skills is effective online teaching because improvement in in these skills help students become successful in the future.

Collaboration with other teachers and educators is an emerging requirement of effective online teaching (Rose, 2018). Collaboration with other teachers provides a chance to learn from each other's experiences and find solutions to shared problems. When online teachers collaborate with other teachers, they can bring innovative strategies to boost student learning (Kulal & Nayak, 2020). Improvement in student leadership and communication skills is an indicator of effective online teaching. According to Wang et al., (2021), the objective of both online and traditional classrooms is to improve all skills of students that they need to become successful in their professional life. Improving student communication and leadership abilities is an important requirement of effective online teaching.

A vision of teaching and learning play a vital role in making online teaching effective. Furthermore, standards for student learning, performance expectations from online teachers, and a framework of instructions are other elements in the analysis of the effectiveness of online teaching (Kulal & Nayak, 2020). According to Roddy et al., (2017), online teaching is effective not only when it improves professional development and growth of teachers but also when the goal of increasing student learning is achieved by community members, policymakers, and school districts working collaboratively.

Much research has been done regarding online pedagogy and instructions at the high school level. The study conducted by Kerr (2011) is about online pedagogy and instruction at the high school level. In his study, Kerr described that online education is becoming an alternative to traditional face-to-face classrooms in the United States. With the increase in popularity of online education at the high school level, there is a need to define guidelines and recommendations to improve the quality of online teaching. Participants of Kerr's study were from three different online high schools--public, charter, and an online consortium of connected schools. Participants were history teachers, and their students were in online courses. Data was collected via interviews, observations, and school records. After analysis of the collected data, Kerr found that success of any online course is linked to maximum utilization of online technologies and tools which are affordable for both teachers and students. He also found that online teaching becomes effective when the high school teacher implements any technology for online courses after making sure that adoption of online tools is possible for all students. As a result, easy access of technologies and online learning materials is another indicator of effective online teaching in high school. Kerr (2011) also found that timely feedback from online teachers and encouraging students to freely interact with each other are some other factors for online pedagogy and instruction in high school. Late feedback to students in an online course results in missed opportunities of scaffolding and higher order and meaningful learning.

Effective online teaching at the high school level is also found to be associated with student-student interactions (Kerr, 2011). To make online courses effective, high school teachers can improve structured instructions about student-student interactions to

facilitate the communication and peer-engagement. Kerr (2011) also indicated that bringing low-performing students to lead the online discussion is an important online pedagogical strategy to improve student-student interaction in an online course. High speed Internet and good hands-on usage of technological tools for online education also result in improvement of student learning in high school. Regarding the role of school administration and the school district towards online pedagogy and instructions in high school, Kerr (2011) found that high school teachers achieve a high level of student outcomes when the school district and administration provide a quiet and peaceful learning environment. Furthermore, considering affordability of technologies by students at home and at school is another requirement that school districts need to fulfill in order to make any online course successful.

Different studies have found that the key elements of successful online pedagogy and instructions for high school include multiple content sources, timely feedback, student involvement in course decision-making, integration of student management, clear assessment rubrics, and the provision of authentic learning experiences, fun activities, and social networks (Kerr, 2011). Kerr (2011) found the following steps to be important for effective and successful online pedagogy and instructions for high schools: multiple sources of contents, providing timely feedback to students, giving importance to the voice and opinions of students in deciding course learning strategies and technologies related to course, integrating student management, integration of course structure, clear rubrics for assessment of activities and providing models of excellent work. Kerr's study also confirmed that creating authentic learning experiences, providing fun activities for students, and incorporating social networks as ways of improving communication and

affirming that students can use all technologies related to online course are some other elements of effective online pedagogy and instructions for high schools.

The principles of "show up and teach" and practicing proactive course management, including clear communication of expectations, are key elements of effective online teaching for high school teachers (Cheung & Cable (2017). According to Cheung and Cable (2017), the first principle of effective online teaching for high school teachers is to show up and teach. However, in an online classroom, “show up and teach” in online education now means students need more help and availability of their instructors as compared to a traditional classroom. Simple “show up and teach” opposes the misconception that online courses are self-taught, and there is less need of availability of instructor (Cheung & Cable, 2017). In reality, most students need their online teachers as guides and facilitators to perform different activities, such as navigating course content, understanding tasks, and connecting their learning with the outside world (Cheung & Cable, 2017). According to this principle (of “show up and teach”), effective online teaching occurs when a teacher actively participates in an online classroom to facilitate the learning experiences of students.

The second common principle and element of effective online teaching is practicing proactive course management strategies (Cheung & Cable, 2017). Communicating clear expectations with students is another important element of effective online teaching. In this regard, recent research studies have illustrated that success and positive outcomes of an online course are linked with how well a teacher has communicated the course expectations with students (Cheung & Cable, 2017). This is very important when students are taking their first online course and are unfamiliar with

the online platform being used. Effective online teaching is when a teacher clearly describes assignments and methods of submission of assignments, etiquette, and rules of communication with the teacher and other students, samples of good online assignments, and how to access learning materials and information about school policies about the course.

Recent research studies have found that taking into account the learners' perspectives when selecting technologies for teaching is also an important principle of online teaching. The findings from Kulal and Nayak's (2020) study shows that selecting any technology for teaching, an effective online teacher must also keep in view the learners' needs. Online teaching becomes effective when a teacher considers students performing a task using technology--what media features will facilitate the learning by the students, which selected technology will allow students to learn in groups as well as individually, which learning context will be facilitated by the selected technology, and if there is support from the school for use of this technology for teaching and learning. According to Burns (2011), effective learning is achieved when suitable technologies are implemented by teachers and school administrations. An effective teacher needs to use effective technology for teaching online courses.

Research has identified several key factors that contribute to effective online instruction. Firstly, establishing patterns of course activities and clear communication of expectations help to create structure and reduce stress for students, leading to improved learning outcomes. Secondly, the integration of various content sources and the use of diversified teaching approaches, along with task orientation and guidance of student engagement, promote knowledge transfer and enhance the learning experience. Thirdly,

online teachers need to "show up and teach" by being actively present and available for students, debunking the misconception that online courses are self-taught. Proactive course management, including timely feedback and consideration of learners' needs when selecting technologies, also play crucial roles in effective online teaching. Additionally, effective communication and clear guidelines for assignments, communication etiquette, and access to learning materials are essential for student success. The research findings emphasize the importance of teachers' expertise in utilizing effective technologies and highlight the collaborative nature of effective teaching, wherein teachers continuously adapt and expand their teaching strategies. Overall, delivering effective online instruction involves the thoughtful integration of technology, student-centered approaches, clear communication, and active teacher engagement to support students' learning and maximize their academic achievements.

Critical Factors for Successful Online Teaching: An Extensive Literature Review

Recent research has examined the specific issues experienced by students learning online during the pandemic. Pozzoli et al. (2021) conducted a study to examine the factors that impacted students' online learning during the COVID-19 pandemic. Their original study was focused on factors that facilitated online learning and was designed to be longitudinal. They hypothesized that students who had good family culture and support from teachers would perform better in online courses. However, the specifics of their planned data collection corresponded to having data from before (November, 2019) and then after (May, 2020) the shut-down in Italy. Data were collected using a self-reporting questionnaire and an online survey and analyzed using Hayes's PROCES macro with regression analysis technique. The authors found that students who had a calm,

supportive, and highly organized environment at home showed better performance in online classrooms than those who did not. The study also revealed that students who had good relationships with their teachers and whose teachers showed a high level of interest in their well-being had better academic performance and less stress. The authors suggested that parents should focus on providing a calm and peaceful environment at home, and teachers should show good concern towards the well-being of their students to improve their performance in online classrooms.

One issue that has been investigated in online learning concerns the issue of motivation. Kim and Frick's (2011) study aimed to investigate the relationship between self-directed electronic learning, motivation, and time management in online classrooms. The study surveyed students who were taking self-directed electronic learning courses in different educational institutions. The study found that 94.2% of the participants preferred online classrooms because it was easy to set learning schedules with online classrooms as compared to traditional classroom settings. The motivational level of the participants during the start and middle of the self-directed electronic learning course was high. However, 26% of the participants described that their motivational level decreased as they proceeded with the self-directed electronic learning course. It was also found that age is correlated with motivational level, as older participants were highly motivated as compared to younger participants during the self-directed electronic learning course.

Related to the overall issue of motivation, researchers have explored factors that improved motivation in online classrooms. Kim and Frick's (2011) study revealed that participants' motivation increased when they got regular feedback on their performance from online teachers. Activities and tasks set by online teachers for online course content

that enhance the engagement of students were also found to be significant in increasing the motivational level of the research participants. In addition, multimedia presentations and real-world problems in assignments and other activities of the course were identified as motivating factors for students in online classrooms. Communication with online teachers was also identified as another motivational factor for learners in online classrooms. Based on these findings, the authors recommended that educational institutions should focus on improving communication between students and online teachers to enhance students' motivation in online classrooms. The study also implies that online teachers can adopt strategies to motivate students in online classrooms by keeping in view their age, providing regular feedback, and incorporating multimedia presentations and real-world problems into online course content. Overall, the study provides valuable insights into the factors that impact the motivation and learning of students in online classrooms.

Effective online teaching involves the extensive use of proactive course management strategies to ensure successful learning outcomes. According to Rose (2018), a teacher attains a high level of effective online teaching when he extensively uses different proactive course management strategies, such as monitoring submissions of online tasks (e.g., assignments, discussions, etc.), reminding students about deadlines of assignments and exams, analyzing communication barriers, and taking necessary steps to remove barriers and adjust the online class schedule in view of different circumstances. The degree of proactive online course management strategies depends on the structure and type of course and experience of both learners and teachers. For example, a new course with different contents requires the online teacher to use more proactive course

management strategies than an old online course which has been taught by a teacher many times. This study suggests that teachers who employ proactive course management strategies in their online teaching practices are more likely to achieve a higher level of effectiveness. These strategies include monitoring online task submissions, providing timely reminders about assignments and exam deadlines, addressing communication barriers, and making necessary adjustments to the online class schedule based on various circumstances. This study also suggests that by implementing these strategies, online teachers can enhance the overall quality of the learning experience and promote successful outcomes for their students.

Students' autonomy in online learning empowers them to take ownership of their education, make decisions about their learning process, and engage in self-directed learning activities. Louick et al. (2019) examined how teachers can promote students' autonomy using an autonomy-oriented literacy environment called Udio. The study observed the methods and approaches of teachers to promote students' autonomy and found that many teachers were supporting students' autonomy on Udio. However, some teachers rejected students' autonomy and provided all the information to guide students' learning. The study concludes that struggling readers should be supported by teachers using a balanced approach to promote students' autonomy. This study suggests that while many teachers in the Udio environment support and foster student autonomy, there are instances where some teachers reject autonomy and adopt a more directive approach. The findings reveal the need for teachers to strike a balance between providing guidance and allowing students to exercise their autonomy. In the context of struggling readers, the study emphasizes the importance of supporting these students through a balanced

approach that fosters their autonomy while providing appropriate scaffolding and guidance.

There are different types of factors that impact the teacher's experience of knowledge sharing through online platforms. Hew and Hara (2007) conducted a study to identify the motivational factors and barriers that online teachers face when sharing knowledge in online classrooms. The researchers collected data through online observation, interviews, and analysis of messages from the Literacy Educator Listrserv. The results indicated that requests, appreciation, and announcements were the key motivational factors that encouraged online teachers to share knowledge with others in the online learning environment.

Additionally, the study identified four motivational factors for knowledge sharing: altruism, egoism, collectivism, and principlism. The authors also found that practical knowledge and knowledge about personal expectations in the online classroom were two types of knowledge commonly shared among participants. The study also identified several barriers to knowledge sharing, including a lack of subject knowledge, time constraints, and unavailable technology. Overall, the study recommends that online teachers should understand the importance of knowledge sharing and overcome the barriers to improve their performance in the online classroom.

Hew and Hara (2007) also found that the act of sharing knowledge allows online teachers to discuss issues and course content with one another, leading to the discovery of solutions to problems related to online teaching. Emotional attachment is a significant factor that motivates online teachers to share knowledge with each other, according to the authors. The authors also identified lack of knowledge, time, and access to technology as

barriers to knowledge sharing among online teachers. The study's implications suggest that online teachers should recognize the importance of knowledge sharing with their peers, which could ultimately improve their performance in the online classroom. This study suggests that online teachers are motivated to share knowledge with others in the online classroom through factors such as requests, appreciation, and announcements. The research highlights the importance of practical knowledge and knowledge about personal expectations in the online classroom, which are commonly shared among participants. However, the study also identifies barriers to knowledge sharing, including a lack of subject knowledge, time constraints, and limited access to technology. This study suggested that to improve their performance, online teachers should recognize the significance of knowledge sharing, overcome these barriers, and foster emotional attachment and collaboration among peers to enhance the online teaching experience.

Adaptation and effective utilization of online learning platforms by students is dependent on certain factors. There are different research studies that focus on examining the factors which directly or indirectly impact the adaptation and utilization of online platforms by students. Almaiah et al. (2022)conducted their study with the aim of investigating the perception of Saudi students about the Madrasati platform and indicating the factors that affect the adaption of the Madrasati platform by university students. Data was collected using an online survey which was developed following the principles of quantitative research. The researchers' hypotheses were analyzed by using SEM modeling.

Participants of this research study were 3.3. million students who used the Madrasati platform; data were collected by using the simple random sampling technique.

After analyzing the data, the researchers found that system quality, service quality, content quality, technology infrastructure, awareness, university management support, security concerns, and training were critical factors that impacted the usage of the Madrasati platform by university students. All of these factors also significantly influence the adoption of the Madrasati platform among research participants. This research contributes to the existing knowledge and practices regarding the Madrasati platform's adoption and can help facilitate and promote its use among students in Saudi Arabian universities. By understanding and addressing these factors, educational institutions can facilitate and promote the effective utilization of the Madrasati platform, leading to improved student engagement and learning outcomes.

Learning is an ongoing process that continues throughout life, encompassing both personal and professional experiences. For teachers, learning occurs through their teaching practice and interactions with educational technologies. While training programs can be beneficial for enhancing teachers' skills in managing online classrooms, their effectiveness can vary.

In a study conducted by Comas-Quinn (2011), the author aimed to investigate the effectiveness of training programs for teachers in online education, as well as the self-directed learning of teachers in online classrooms. To collect data for this study, a survey methodology and interviews with participants were used. The participants were teachers enrolled in a Spanish language training program. The study identified three themes based on the collected data. The findings also indicated that teachers encountered technical issues during training programs related to online education. These technical issues were often related to a lack of knowledge and experience in using educational technologies for

online teaching. Many participants of this study reported that while the training program they attended focused on the use of technology in online education, it did not adequately explain the rationale behind using specific technologies in the online classroom. As a result, teachers often resorted to self-directed learning to understand the purpose and effective use of different technologies for improving student learning in online classrooms.

Performance expectancy, social influence, and facilitating conditions are some important factors that impact the behavioral intentions of teachers during online learning. Masmali and Alghamdi ‘s (2021) study investigated the impact of various factors on the behavioral intention of elementary school teachers in Saudi Arabia to continue using online learning. The study population consisted of elementary school teachers in a public school in Al Bahah Region, Saudi Arabia. The sample was selected using convenience sampling from the Department of Education in Al Bahah Region. The study utilized multiple regression analyses to examine the effect of performance expectancy, effort expectancy, social influence, and facilitating conditions on the teachers' behavioral intention to use online learning.

The study findings revealed that performance expectancy, social influence, and facilitating conditions had a significant impact on the behavioral intention of elementary school teachers to use online learning. Conversely, the degree of ease, or effort expectancy, did not have a significant impact on their behavioral intention to use online learning. Nonetheless, teachers still perceived online learning as a valuable technology. The results of this study suggested that performance expectancy was the most influential factor on teachers' behavioral intentions. Furthermore, facilitating conditions had a

positive and significant impact on teachers' behavioral intention to continue using e-learning. The study's findings suggest that the implementation of online learning requires attention to performance expectancy, social influence, and facilitating conditions to maximize adoption among teachers.

Different online learning platforms have different types of usability. Online platforms with varying levels of usability show different levels of effectiveness towards overall online learning. Shishah (2021) conducted his research study to explore the level of usability of the Madrasati platform by Saudi teachers and to determine the factors that impact the usability of the Madrasati platform. The author conducted this study using semi-structured interviews and an online survey. The results of this study showed that the Madrasati platform is an educational technology tool that is designed to support teaching and learning activities in schools.

The results of the study suggest that the Madrasati platform has a high level of usability, as perceived by teachers. However, some factors, such as technical problems, limited access to the Internet, and inadequate training on how to use the platform, were found to negatively affect the usability of the platform. The study concluded that these factors must be addressed to enhance the effectiveness and efficiency of the Madrasati platform to support teaching and learning activities in Saudi Arabian schools. Overall, the study suggests that while the platform has potential, addressing the identified usability factors is crucial for maximizing its benefits and improving the overall educational experience for teachers and students.

Gifted students and their teachers face different types of challenges during online education. Thomson (2010) carried out a study with the aim of investigating the effects of

the online environment on the learning of gifted students, as well as identifying the challenges faced by both teachers and gifted students during online education. The researcher conducted exploratory interviews and used surveys to collect both qualitative and quantitative data. The students preferred to be interviewed by email and were sent the interview questions to answer. Qualitative data from the survey was analyzed using a coding approach, while PAWS software was used for analyzing quantitative data. The researcher utilized independent sample t-test to compare ratings given by participants for successful online teaching practices and online experience of gifted students. Analysis of the qualitative data revealed that good communication between teachers and students is a crucial factor that impacts the online classroom environment and overall learning of gifted students. The author also found that individual emails sent by teachers to students were more effective than posting information to the whole class.

According to study participants (teachers), students feel motivated and encouraged when they receive individual feedback from their teacher via email, which they refer to as "eye contact." The study found that building a rapport of trust between teachers and students is essential for successful online learning, as it can increase students' performance. Miscommunication can be harmful to students' performance and teacher effectiveness, as it can lead to misunderstandings of tasks and assignments.

Management and self-motivation were reported as major challenges by students in the study, with late responses from teachers and no opportunity to ask questions cited as issues. The study also suggests that online teachers should possess patience, an interest in their students' benefit, and a high level of willingness to help. The analysis of quantitative data revealed that clear instructions and setting expectations were the most prominent

factors affecting student learning according to 82% of teachers. 60% of teachers stated that flexible work schedules were important for gifted students in an online classroom, while 40% recommended using modern technologies. The study also found strong correlations between student-centered approaches and teachers' performance and student learning.

The teacher's role in an online classroom is that of a facilitator, utilizing various technologies and methods to enhance student learning. Kim et al. (2018) conducted a study at a Korean language school, involving six kindergarten students and their teachers who used animated books to teach Korean folktales. The researchers observed the students in class and recorded their responses on learning about the folktales and their bilingual abilities using audio and video. Upon analyzing the collected data, the researchers discovered that the use of online animated videos and bilingual discussions was an effective way for teachers to learn.

Furthermore, the study found that students learned more about cultural norms and traditions when online animated story videos were used instead of traditional print books. The parents who participated in the study also acknowledged the benefits of using online storybooks, as they observed an improvement in their children's learning skills. Students were more engaged when online animated videos were used to teach folktales. The study also revealed that multimedia presentations, animated books, and other modern technologies were helpful in facilitating students' learning in online courses. As a result, the authors suggested that teachers should enhance their skills related to the use of online technologies to facilitate students' learning about culture and support their learning through online videos.

The authors also emphasized that school management and principals could promote the learning of Korean-American students by enhancing the professional abilities of their teachers in using online technologies. This study suggests that the use of online animated videos and bilingual discussions, as opposed to traditional print books, can be an effective method for teaching Korean folktales and enhancing students' learning about cultural norms and traditions. The study found that students were more engaged and showed improved learning skills when exposed to online animated story videos. Additionally, the study highlights the importance of teachers enhancing their skills in utilizing online technologies to support students' learning and recommends that school management and principals promote the professional development of teachers in this area. Overall, the findings underscore the potential of multimedia presentations and modern technologies in facilitating students' learning in online courses and promoting cultural understanding.

Online discussion is an important part of online learning, and it directly or indirectly impacts the online learning process. There are different factors which impact the online discussion skills of students and one of those factors is teacher guidance. The objective of the study conducted by Asterhan et al. (2011) was to investigate whether teacher guidance can have an impact on the online discussion skills of students. Additionally, the study aimed to determine how different types of teacher guidance can affect the quality of online discussions, as well as to examine any differences in the quality of online discussions between male and female students.

Participants in the study consisted of 44 male students and 38 female students from a rural secular school in Israel. Three female teachers from the same school were

also involved in the study, all of whom had received training from the Kishirum program, which focuses on the development of argumentative and dialogical thinking skills in teachers. The students were divided into 24 groups, with 12 groups consisting of male students and the other 12 groups consisting of female students. During online discussions, the teachers provided epistemic guidance (EGA) and interactional guidance (IGA) to the students. The data collected in this study consisted of 24 discussion maps, which were analyzed based on the argumentative quality and collaborative aspects of the students' discussions.

The findings revealed that students who received EGA from their online teacher had more argumentative, well-reasoned, and critical discussions compared to those who received IGA. The number of reasoned arguments was also higher in discussions of students provided with EGA. However, students who received IGA were more participative and interactive although their discussions lacked good quality argumentation and critical thinking. Furthermore, the study found that female students had more argumentative and interactive discussions than their male counterparts.

In conclusion, the study suggests that teachers can improve students' argumentative skills and increase their participation in online classrooms by providing both EGA and IGA. Additionally, the authors recommend that online teachers should receive training that focuses on different types of guidance and guidance styles. The study suggested that teacher guidance has a significant impact on the online discussion skills of students. The study found that providing EGA resulted in more argumentative, well-reasoned, and critical discussions among students. On the other hand, IGA led to

more participative and interactive discussions but lacked quality argumentation and critical thinking.

The effectiveness, usability, and adoption of the Madrasati platform has been tested by different research studies. Alkinani and Alzahrani (2021) investigate the effectiveness, usability, and adoption of the Madrasati platform from the perspective of teachers in Saudi Arabia. To assess the usability of the platform, the researchers used the SUS and CSUQ tests. A quantitative research design was employed, and data was collected through a questionnaire distributed randomly to 200 teachers. Descriptive and inferential analysis was conducted using SPSS (25).

The results showed that the teachers were highly satisfied with the Madrasati platform and found it to be well-designed. The platform had a positive impact on teaching quality and was highly usable for teaching purposes. The study also found that the quality of the information content on Madrasati played a significant role in shaping teachers' perceptions and attitudes towards the platform. These findings can be valuable to the MOE and institutions seeking to incorporate technology in their teaching and learning processes. Overall, the study suggests that the Madrasati platform is a useful and effective tool for supporting teaching and learning activities in Saudi Arabian schools.

This literature review indicated that teaching quality refers to the collection of approaches and skills that help the students improve their learning. Quality teaching has a direct impact on students' academic performance, values, skills, and professional success after completing their education. Per constructivism, quality teaching occurs when a teacher involves students in activities that require them to reconcile information received in classroom (both online and in person in the traditional classroom) with their already

existing knowledge. In constructivism, quality teaching occurs when students interact with individuals who are more knowledgeable than their own knowledge.

In view of transformational theory, teaching quality improves when a teacher acts as a coach, makes groups of students, and both teacher and groups of students collaborate with each other to master a body of knowledge. Furthermore, this theory indicates that teaching quality also improves when a teacher puts himself in the role of traditional teacher but keeps in view building a positive attitude in students towards learning. Transaction distance theory also considers frequency and opportunity of communication between teachers and students as quality determinants of online teaching.

Online education is playing an important role in the growth and development of developing nations because online education is affordable and fast. Effective online teaching is also associated with improvement in students' critical and problem-solving skills. Online teaching becomes effective when the high school teacher implements any technology for online courses after making sure that adoption of online tools is possible for all students.

Effective online teaching at the high school level is also found to be associated with student-student interactions. The integration of various content sources and the use of diversified teaching approaches, along with task orientation and guidance of student engagement, promote knowledge transfer and enhance the learning experience. In addition, online teachers need to "show up and teach" by being actively present and available for students, debunking the misconception that online courses are self-taught. The act of sharing knowledge allows online teachers to discuss issues and course content with one another, leading to the discovery of solutions to problems related to online

teaching. Emotional attachment is a significant factor that motivates online teachers to share knowledge with each other.

The literature review also indicated that system quality, service quality, content quality, technology infrastructure, awareness, university management support, security concerns, and training are critical factors that impact the usage of the Madrasati platform by university students. All these factors also significantly influence the adoption of the Madrasati platform among research participants.

CHAPTER THREE
METHODOLOGY

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This chapter outlines the research methodology employed in this study, which aimed to investigate experience of using the Madrasati platform to deliver instruction in Saudi Arabia. The chapter begins by describing the research design, including the approach, strategy, and sampling method. The section then details the research instrument utilized for data collection, which is a survey conducted via email. The chapter also discusses the ethical considerations debated during the study, including informed consent and participant confidentiality. Finally, the data analysis techniques utilized to analyze the survey data are presented. By providing a detailed description of the research methodology, this chapter aims to establish the validity and reliability of the research findings and ensure that the research is conducted in an ethical and rigorous manner.

Overview and Research Design

Quantitative and qualitative research methods were used to answer the specific research questions of this study. This study aims to answer the following main research questions:

- To what extent did the Madrasati platform contribute to support the performance and role of teachers in high school?

The sub-questions of this research study include:

- To what extent did the Madrasati platform impact the teachers' experiences when delivering content, communicating, evaluating, and motivating students?

- To what extent did the Madrasati platform impact the teachers' experiences when focusing on students' autonomy and sharing knowledge?
- To what extent were the features of the Madrasati platform challenging and need to be improved?

In this study, a mixed methods research design was appropriate as it allows for both qualitative and quantitative data collection and analysis methods to be employed. The use of qualitative data collection methods, which in this study consisted of open-ended survey questions, can help to explore teachers' experiences and perspectives, enabling the identification of important themes and patterns. These methods can provide insights into the impact of the Madrasati platform on teacher performance and role, as well as identifying any challenges or barriers that teachers may encounter when using the platform.

Quantitative data collection methods in this study consisting of close-ended survey items were used to measure the impact of the Madrasati platform on teachers' self-reports of their performance and role. The results from the quantitative data can be analyzed statistically, using regression analysis, to establish the relationship between the Madrasati platform and teacher performance.

By using a mixed methods research design, this study can provide a more comprehensive understanding of the impact of the Madrasati platform on teacher performance and role. The qualitative data provide rich descriptions and insights into the experiences of teachers, while the quantitative data provide objective measures of the impact of the platform. Combining the results from both data collection methods can provide a more complete picture of the research questions.

Research Setting

The present study will take place in the Jazan region of Saudi Arabia, which is located in the southern part of the country. The Jazan region is known for its diverse terrain which includes mountain ranges, plains, and coastal areas. The region is home to several cities and towns, including Jazan City, Abu Arish, and Samtah. Jazan Province, located in southwestern Saudi Arabia, is home to a diverse population that contributes to the region's cultural tapestry. The province has experienced significant population growth in recent years, fueled by a combination of natural growth and migration. As of my knowledge cutoff in 2021, the population of Jazan Province was estimated to be around 1.7 million people.

Arabic is the official language of Saudi Arabia, including Jazan Province. Arabic is spoken by the majority of the population, serving as the primary means of communication in everyday life, business transactions, and education. Education is highly valued in Jazan Province, as it is throughout Saudi Arabia. The Saudi government has made significant investments in the education sector to ensure widespread access to quality education. The education system follows the Saudi Arabian curriculum, emphasizing Islamic studies, Arabic language, mathematics, sciences, and social studies. Primary and secondary education is mandatory for both boys and girls.

In recent years, Jazan has witnessed remarkable developments in its educational infrastructure. The province is home to numerous schools, both public and private, catering to the educational needs of its residents. Additionally, Jazan University, established in 2006, has become a prominent institution of higher education, offering a wide range of academic programs across various disciplines. Efforts have been made to

enhance educational opportunities in Jazan, particularly in vocational and technical training. These programs aim to equip students with practical skills that align with the demands of the local job market. Furthermore, the government has prioritized the establishment of educational institutions that support research and innovation, fostering intellectual growth and knowledge creation in the region.

The Jazan region was chosen as the setting for this study because it is home to a diverse population of teachers who have experience using the Madrasati platform in high school classrooms. The region is also a key focus area for educational development initiatives in Saudi Arabia and has received significant investment in recent years to improve the quality of education in the area. Data collection for this study will take place through an electronic survey sent to teachers at various high schools in the Jazan region. These schools were selected based on their proximity to urban centers and accessibility to the Madrasati platform. Schools with a higher proportion of teachers who have experience using the platform will be prioritized for inclusion in the study.

The Jazan region offers a rich context for studying the impact of the Madrasati platform on high school teachers. Its diverse terrain and population, as well as its investment in educational development, make it an ideal setting for understanding how this platform can support the performance and role of teachers in the region. The Jazan region is known for its demographic diversity with a mix of ethnicities and nationalities. This diversity can impact the experiences of teachers using the Madrasati platform in different ways, and studying its impact in this context can provide insights into how it may affect teachers from different backgrounds. The Jazan region has a relatively high student population, with a significant number of students attending high schools in the

region. This aspect of the setting makes it an ideal setting to study the impact of the Madrasati platform on teachers in high school classrooms.

The Saudi Arabian government has been actively promoting the use of educational technology in classrooms, and the Madrasati platform is one of the key tools being used in this effort. The Jazan region is a focal point for these initiatives, and studying the platform's impact in this context can provide valuable insights into the effectiveness of these efforts. The Jazan region has a relatively high level of economic development and infrastructure, which can impact the availability of resources and support for educational initiatives. Studying the impact of the Madrasati platform in this context can help understand how the platform may function in areas with more resources and support.

Overall, the Jazan region was chosen as the setting for this study due to its diversity, high student population, support for educational technology, and availability of resources. These factors make it an ideal setting to study the impact of the Madrasati platform on high school teachers and to understand how it may contribute to the broader educational development efforts in Saudi Arabia.

Research Participants

Study participants will include teachers of different courses for high school students using the Madrasati platform. The choice of participants was made based on their experience and familiarity with the platform as well as their ability to provide insights into the impact of the platform on their teaching performance and roles. Before conducting the survey, participants of this study will be informed of the objectives of this research so that they can actively participate in the project. To ensure a diverse sample,

the participants will be selected from a range of high schools and educational backgrounds. Specifically, teachers of different courses, such as science, math, literature, and language will be included in the study. This decision was made because each subject area may require different features in online platforms like the Madrasati, and it is essential to understand how these features can impact the performance and role of teachers across a range of disciplines. I also believe that teachers teaching different courses, such as science, math, literature, and language, will require different features in online platforms, such as the Madrasati; hence, the plan to include teachers of different backgrounds is necessary to capture the most reliable data to analyze the effectiveness of different features of the Madrasati platform.

The sample size for this study will be approximately 1500 high school teachers, including both men and women. This number was chosen to provide a sufficient sample size for statistical analysis and to capture a range of experiences and perspectives. Participants will be recruited through a random stratified sampling technique, which involves randomly selecting high schools from the Jazan region and inviting teachers from those schools to participate in the study. Before conducting the survey, all participants will be informed of the objectives and methodology of the study and will be given the opportunity to opt-in or opt-out of the project. The reason for using this sampling technique is to reduce selection bias and to ensure a representative sample of the population. By randomly selecting schools and recruiting teachers from various backgrounds and subject areas, the study can provide a more comprehensive understanding of the impact of the Madrasati platform on high school teachers in the Jazan region of Saudi Arabia. Thus, I will include teachers of different classes/levels in

order to have data that better represent the picture of the Madrasati platform and teachers' perceptions and experiences surrounding it.

Data Sources

The instrument for data collection is a survey. The survey will consist of multiple-choice linear frameworks that ask teachers to report on the extent to which the Madrasati platform has contributed to supporting the performance and role of Saudi high school teachers. The survey instrument was chosen for this study due to its ability to collect data from a large number of participants in a short period of time. Multiple-choice linear frameworks will be used to assess the extent to which teachers report that the Madrasati platform has contributed to supporting the performance and role of high school teachers. The survey questions were designed based on the research questions and sub-questions. The survey questions were developed based on previous research studies and the conceptual framework. The items in the survey were selected to ensure that the research questions and sub-questions were adequately addressed.

The survey will be structured with multiple-choice questions as well as open-ended questions to allow for more detailed and nuanced responses. The survey will be divided into sections with the first section gathering demographic information about the teachers, such as their age, gender, educational background, and years of teaching experience. The second part of the survey will focus on the teachers' experiences using the Madrasati platform, including the frequency of use, ease of use, and their overall satisfaction with the platform. The third section will ask teachers to rate the impact of the Madrasati platform on their teaching performance and role, using a five-point scale. Additionally, this section will include open-ended questions to allow teachers to provide

more specific and detailed feedback on the platform's impact. The fourth and final section of the survey will ask teachers to provide suggestions for improving the Madrasati platform and address any concerns they may have about its use in high school classrooms.

The survey will be designed following multiple-choice linear frameworks; a linear scale is a type of rating system in which the audience is provided with numbers to quantify different aspects, such as feelings, satisfaction level, perceptions, etc. There will be different open-ended questions in the survey that will be used to collect data for qualitative analysis. In order to measure the effectiveness of different features of the Madrasati platform, I will design different questions about each feature of the Madrasati platform, and teachers will rate that feature using survey questions.

The survey questions are designed to capture the participants' views and experiences with the Madrasati platform. It will also assess the extent to which they felt that the platform has had an impact (positive or negative) on their teaching skills and enhance student learning outcomes.

Table:3.1 Survey Questions

Research Sub-Questions	Survey Questions
To what extent did the Madrasati platform impact the teachers' experiences when delivering content, communicating, evaluating, and motivating students?	How often did you use the Madrasati platform?
	The use of the Madrasati platform helps students to…
	How useful did you find technologies and tools present on the Madrasati platform?
	How would you rate the Madrasati platform for...
	Describe your experience in using the Madrasati platform while teaching.
To what extent did the Madrasati platform impact the teachers' experiences when focusing on students' autonomy and sharing knowledge?	What features of the Madrasati platform were useful for knowledge sharing and student autonomy?
	How do you feel the Madrasati platform impacted student learning?
	What features of the Madrasati platform were useful for knowledge sharing and student autonomy?
	What features of the Madrasati platform were challenging for knowledge sharing and student autonomy?
To what extent were the features of the Madrasati platform challenging and need to be improved?	How would you rate the Madrasati platform for...
	What features in the Madrasati Platform did you use?
	What is your overall satisfaction with the Madrasati platform as a system?
	Would you recommend the Madrasati platform to your colleagues?

The survey will be piloted to ensure its validity and reliability before actual data collection. To ensure the validity and reliability of the survey among Saudi high school teachers using the Madrasati platform, it will be pre-tested with a small group of participants before being distributed to the larger sample. This process will help to identify any potential issues with the survey design or wording related to the Madrasati platform as well as to ensure that the questions are appropriate for this specific population. Additionally, the survey will be anonymous to encourage participants to provide honest and unbiased responses on their experiences with the Madrasati platform.

The survey was designed in English language. Before distributing the survey to research participants, the survey was translated into Arabic language using the services of a reputable translation center in Saudi Arabia. The center, staffed by proficient professionals, specializes in accurately translating data into various languages. The designed survey was translated into Arabic and then was sent to the research participants. The translation process prioritized accuracy, cultural sensitivity, and consistency in terminology. Prior to widespread distribution of translated survey to participants, a pilot test involving Arabic-speaking individuals was conducted to address any potential issues. This methodological approach aligns with ethical considerations, respecting the privacy and confidentiality of survey participants. By leveraging the expertise of a translation center based in the target region, this research seeks to enhance the validity and reliability of findings.

Data Collection Procedures

To ensure compliance with ethical guidelines and gain permission to conduct the survey, the research process involved obtaining approvals from both the Institutional Review Board (IRB) of Oakland University in Rochester, Michigan, and the Ministry of Education (MOE) in Saudi Arabia. The researcher initiated the process by submitting a formal research proposal to the IRB, outlining the objectives, methodology, and potential benefits of the study. The proposal also included the informed consent form that participants would need to agree to before participating in the survey.

After receiving IRB approval, the researcher proceeded to seek permission from MOE to conduct the study in high schools. The researcher prepared a comprehensive request letter detailing the purpose, significance, and methodology of the research. The letter highlighted the potential contribution of the study to educational practices and emphasized the confidentiality and anonymity of the participants. The researcher patiently followed up with MOE officials to ensure timely approval. Once the necessary approvals were obtained, the researcher established a plan to access high school principals who play a crucial role in facilitating the survey. Initial contact was made through official channels, such as email or phone, to introduce the research and seek permission to engage with their schools. Meetings were scheduled with interested principals to discuss the research objectives, methodology, and potential benefits for their school community.

During these meetings, the researcher explained the survey process and sought the principals' support in disseminating the survey to the teachers in their respective schools. A clear and concise explanation of the survey's purpose, relevance, and time commitment

were provided along with assurances of data confidentiality and anonymity. Upon agreement, the researcher worked closely with the principals to coordinate the distribution of the survey link to the teachers. The researcher shared a unique survey link that would ensure the confidentiality and security of the data collected. Principals were given the flexibility to choose the most suitable method for disseminating the survey, whether through email or any other preferred communication platform.

Throughout the process, the researcher maintained open lines of communication with the principals, promptly addressing any concerns or questions they had. Regular follow-ups were conducted to encourage participation and remind the teachers about the importance of their input. By following these steps, the researcher ensured that the data collection process for the survey was conducted in an ethical and organized manner, gaining permission from both the IRB and the MOE, and establishing collaborative partnerships with high school principals to facilitate the distribution of the survey to teachers. Additionally, qualitative data will be collected through open-ended questions in the survey to gain a deeper understanding of teachers' experiences with the Madrasati platform. The open-ended questions in the ,survey will be based on the research questions and sub-questions.

Data Analysis

The responses to the survey will be analyzed using statistical software, such as SPSS, to explore the relationships between the variables of interest and to answer the research questions. The data collected from the survey will be analyzed using both qualitative and quantitative methods to identify patterns, themes, and trends in the

teachers' responses. Survey questions will be analyzed to ensure that all are related to the research questions and provide answers for all questions of the study.

CHAPTER FOUR
RESULTS

Overview

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The purpose of this research was to comprehensively assess the impact of the Madrasati platform on the performance of high school teachers in the Jazan Region in Saudi Arabia during the COVID-19 pandemic. This research study considered various aspects, including how the platform facilitated content delivery, communication, evaluation, and motivation for students. This objective seeks to understand the extent to which the Madrasati platform played a role in supporting teachers as they adapted to new teaching methods imposed by the pandemic-induced shift to online education. Furthermore, the research also had the aim of analyzing teachers' experiences concerning student autonomy and knowledge sharing within the Madrasati platform. This involved evaluating the platform's influence on teachers' efforts to promote students' autonomy in the learning process and exploring its role in facilitating effective knowledge exchange between educators and students.

The other objective of this study was to identify and analyze the challenges faced by high school teachers when utilizing the Madrasati platform for online education. By examining specific features of the platform, the research study seeks to uncover difficulties encountered by teachers in terms of knowledge sharing, supporting student autonomy, and contributing valuable insights for potential improvements.

In addition, this research study also investigated the role of the Madrasati platform in shaping the future landscape of high school education in Saudi Arabia. In this

regard, the aim was to explore the long-term impact and sustainability of the platform within the education system and considering the integration of new features and facilities to enhance its effectiveness for both students and teachers in the future. Ultimately, the study's aim was to provide practical recommendations for improving the design and structure of the Madrasati platform based on the experiences and challenges identified by high school teachers. These recommendations will not only focus on enhancing the platform itself but also propose measures to improve the overall performance of teachers and the quality of instruction delivered through the Madrasati platform, thus contributing to the ongoing discourse on online education in the context of high school settings in Saudi Arabia.

Participant Characteristics

The participants of this study were high school teachers teaching different courses by using the Madrasati platform. In order to ensure a diverse sample, the participants were selected from different age ranges, teaching experience, and educational backgrounds. It was essential to understand the profile of the high school teachers engaged with the Madrasati platform to contextualize their experiences and perspectives accurately. The participant characteristics are categorized into four key dimensions: gender, age, employment status as a teacher, and tenure in the teaching profession. The purpose of examining these key sociodemographic characteristics of participants was to get a deeper understanding of the diverse perspectives and experiences that contribute to the broader narrative of research findings. This detailed participant profile serves as a foundation for subsequent analysis and discussion of the influence of the Madrasati

platform on their teaching practices and roles. The sociodemographic characteristics of the participants are summarized in Table 4.1.

Table 4.1

Participant Characteristics

		n	%
Gender	Female	68	20.4%
	Male	265	79.6%
Age	Under 25	4	1.2%
	25-30	30	8.8%
	31-40	129	37.8%
	41-50	135	39.6%
	Over 50	43	12.6%
Employment status as a teacher	Internship	11	3.3%
	Part-time	36	10.8%
	Full-time	287	85.9%
Do you work as a high school teacher at another school as well as this school?	Yes	72	21.6%
	No	262	78.4%
How long have you been working as a high school teacher?	This is my first year	22	6.6%
	1-5 years	57	17.2%
	6-10 years	61	18.4%
	10-15 years	84	25.3%
	More than 15 years	108	32.5%

It is interesting to note in Table 4.1 that the majority of participants were male, were above the age of 30, and were employed full time as teachers. About one fifth of the teachers reported that they worked at another school as well as this one. The majority of the teachers had been teaching for more than 10 years.

Madrasati Platform Frequency of Use

The frequency of using online platforms for teaching students directly impacts teachers' experience and role regarding those online platforms. The difference in frequency of using the Madrasati platform could be directly related to the differences in roles and experiences faced by participants of this study. Furthermore, analyzing these differences in frequency of using the Madrasati platform was important because, by understating who often uses it and who does so less often, we can identify the potential correlations with teaching effectiveness, students' engagement, other important aspects of teaching experiences, and the roles of research participants. The frequency of use of the Madrasati platform during teaching practices was a critical factor in this study.

These results show that the teachers who answered the survey all reported having used the platform a large amount of the time. The average of responses was very close to 100, which was the highest response possible. The standard deviation of roughly 20 points indicates that the bulk of the responses were between 80 and 100 because the scale ended before the upper limit of the standard deviation (which would be about 120). This shows that the participants frequently used the Madrasati platform for different purposes.

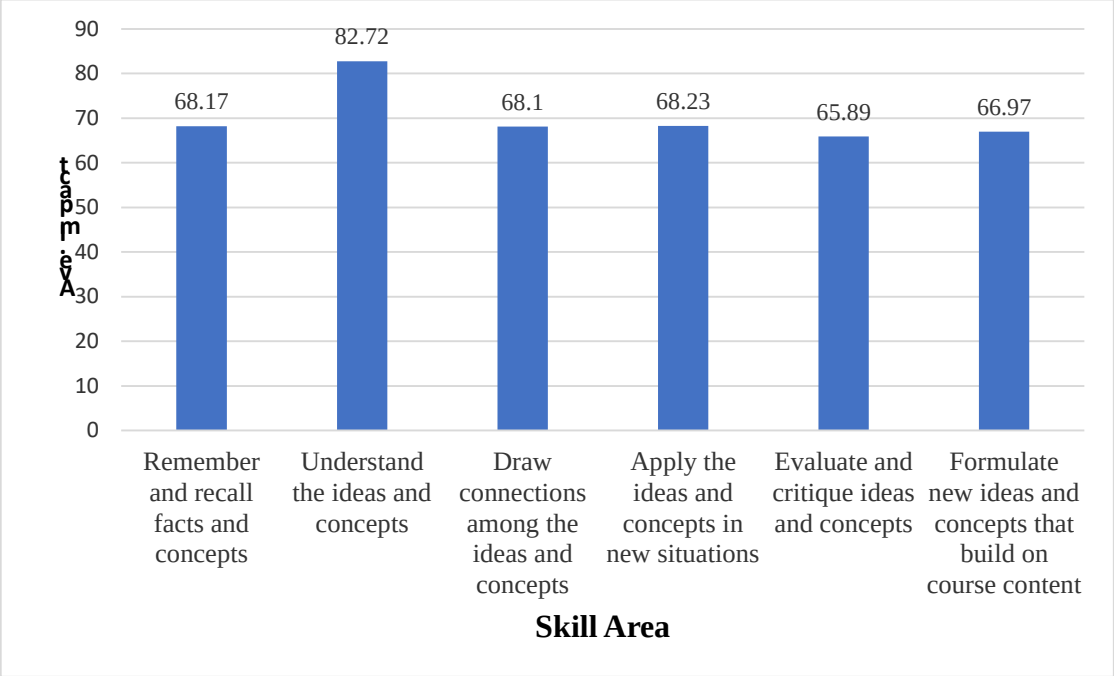
Perceptions about the Effects of the Madrasati Platform on Cognitive Skills

Understanding the participants' perceptions about the impact of the Madrasati platform on cognitive skills of students was an important aspect of this research study. Participants were asked to express their level of agreement with various statements regarding the impact of the Madrasati platform on students' cognitive skills and understanding. The participants were provided with different statements related to remembering and recalling concepts, understanding ideas and concepts, drawing

connections among ideas and concepts; application of ideas and concepts in new situations, evaluation of ideas and concepts, and formulation of new ideas. The participants had to choose a range from strongly agree (at 100) to strongly disagree (at 0). Figure 4.1 represents the perceptions of participants about the impact of the Madrasati platform on cognitive skills.

Figure 4.1

Teachers' Perceptions of the Impact of the Madrasati Platform on Student Cognitive Skills



According to the results outlined in Figure 4.1, participants provided their perceptions of the Madrasati platform in relation to various cognitive skills and understandings. The highest level of agreement was recorded in teachers' views of the platform helping with understanding the ideas and concepts (*M*=82.72). The rest of the

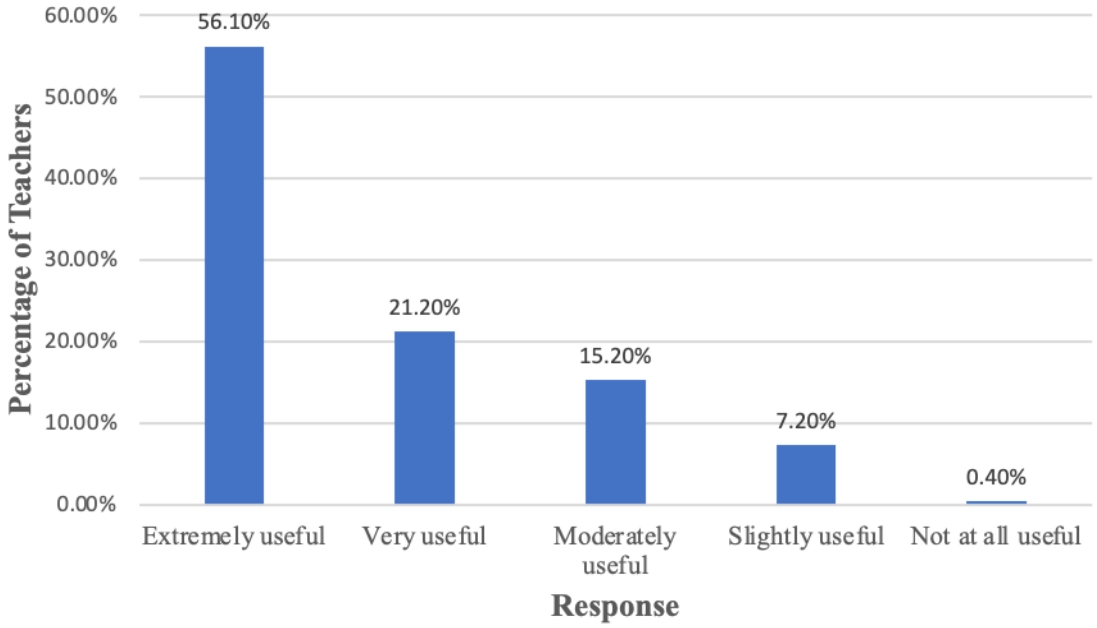
items were very similar. Figure 4.1 illustrated that participants of this research study perceive that the Madrasati platform was useful for students in understanding the ideas and concepts. Furthermore, the second most common perception about impact of the Madrasati platform on cognitive skills was applying the ideas and concepts in new situations. Participants revealed that the Madrasati platform was effective towards improving students' skills of applying ideas and concepts in new situations that they learned thorough its use.

Participants' Perceptions about the Usefulness of Technologies on the Madrasati Platform

Features, technologies, and tools of online platforms directly impact users' experiences and roles. The Madrasati platform has different types of tools and technologies which assist teaching and learning processes. These aspects of the Madrasati platform directly impact teachers' experience and role while using the Madrasati platform. Accordingly, evaluation of the effectiveness and usefulness of technologies and tools available on the Madrasati platform is important; participants were asked, "How useful did you find technologies and tools present on the Madrasati platform?" The aim of evaluating the usefulness of technologies and tools present on the Madrasati platform was to evaluate overall usefulness of the Madrasati platform and to develop a deep understanding of the extent technologies and tools of the Madrasati platform align with teachers' instructional needs. Another aim of getting insights into these perceptions was to understand to what extent participants are satisfied with the Madrasati platform. Figure 4.2 represents the participants' perceptions about usefulness of technologies and tools of the Madrasati platform.

Figure 4.2

Usefulness of Technologies and Tools on the Madrasati Platform



The majority of users found the technologies and tools on the Madrasati platform to be extremely useful. Over 75% of users found the technologies and tools on the Madrasati platform to be extremely or very useful. Perceived usefulness is considered a strong predictor of satisfaction and continued ease of use in the Technology Acceptance Model that was described in Chapter Two.

Effects of the Madrasati Platform

The Madrasati platform is used by teachers for different purposes. It allows teachers to access a digital library, set up quizzes for students, and engage in speed grading. Furthermore, teachers also used it for designing modules, email, discussions, grades, announcements, people (roster) and assignments. In order to evaluate the overall effectiveness of the Madrasati platform, it was important to get insights into which of its

features are most commonly used by participants. Participants were asked, “What features in the Madrasati platform did you use?” To respond to this question, the participants were provided with a list of features that the Madrasati platform offers its users. Figure 4.3 represents the evaluation of features of the Madrasati platform. Discernible patterns emerge regarding their utilization and importance to users.

Figure 4.3

Percentage of Use of Different Platform Features

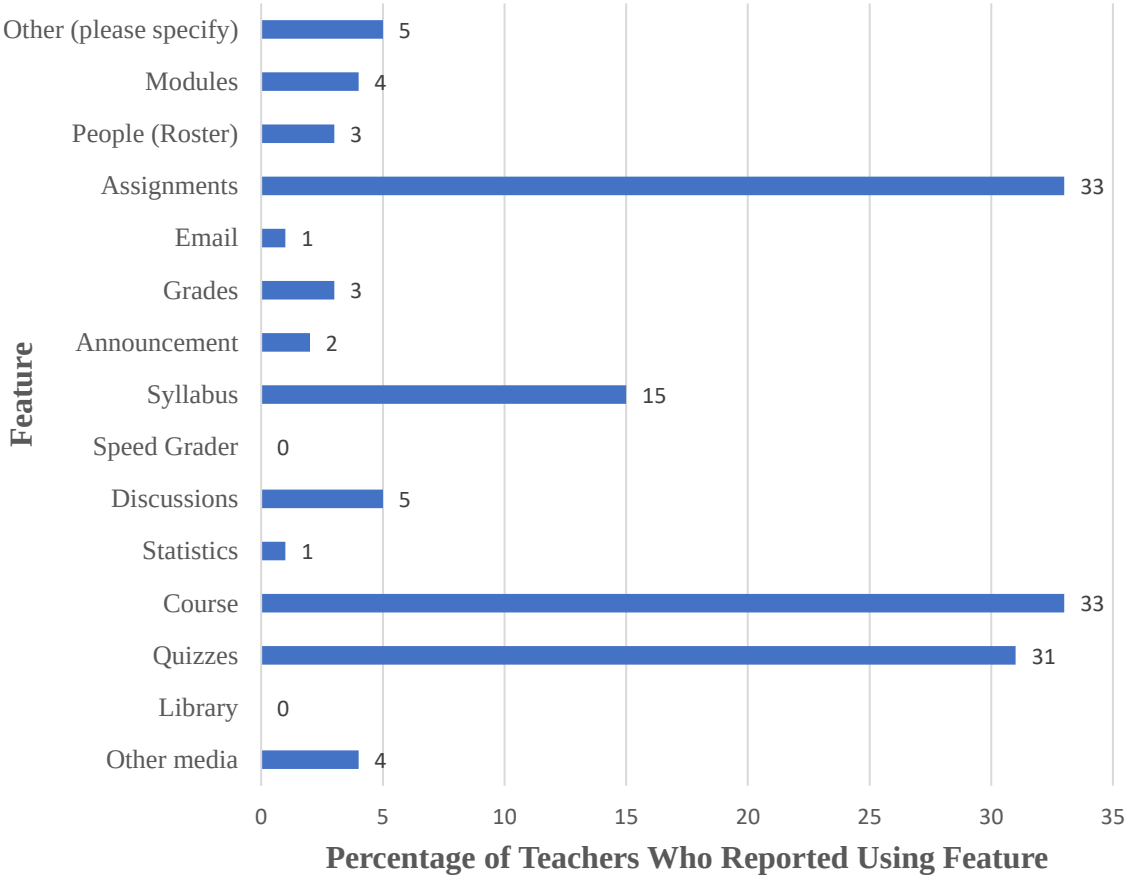


Figure 4.3 shows that the most utilized feature on the Madrasati Platform was "Rubrics" (46.8%). The features "Library" and "Speed Grader" had no users, both recording 0.0%.

The features "Quizzes" and "Assignments" had significant usage, with approximately 11.8% and 12.5% of participants utilizing them, respectively. These features likely play a central role in the teachers' instructional activities, involving assessments and student assignments. In contrast, some features, like "Library," "Speed Grader," and "Statistics," had minimal to no reported usage, suggesting that they may not be integral to the teaching practices of the participants. Additionally, "Course" and "Syllabus" features were moderately used, indicating their relevance in organizing course content. The features "Announcement," "Grades," and "Email" also had limited usage. "Discussions," "People (roster)," and "Other Media" demonstrated relatively low but non-negligible usage.

The results concerning which features were predominantly used by participants provide valuable insights about which features are most in demand by teachers regarding the Madrasati platform and what more features need to be added in the Madrasati platform to enhance teachers' experiences and roles. Additionally, investigating feature usage patterns identified potential gaps or areas where improvements may be needed, thereby contributing to the ongoing development and refinement of the Madrasati platform. These insights into feature usage patterns inform platform developers, educators, and administrators by guiding decisions on feature enhancements, training, and resource allocation to better align with teachers' needs and preferences in the context of use of the Madrasati platform.

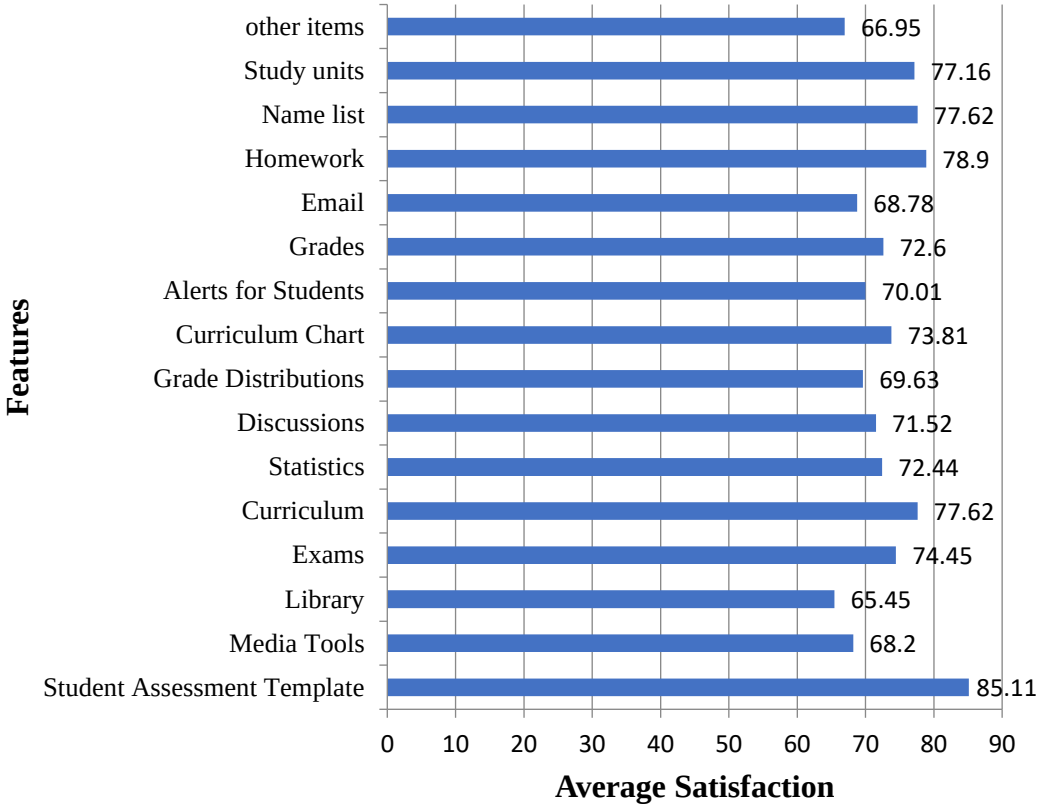
Satisfaction with Platform Features

After identifying the percentage of use of different features on the Madrasati platform, the satisfaction rate associated with each feature was analyzed. The purpose of analyzing the satisfaction rate was to understand the effectiveness and usefulness of different features of the Madrasati platform. Ultimately, the aim was to identify the needs of improvement in different features of the Madrasati platform so that teachers' experiences and roles could be improved in the future. To analyze their satisfaction rate, participants were asked, "For the features you used, please indicate your satisfaction." The scale measuring satisfaction rate was set from 0 to 100.

Figure 4.4 shows comprehensive examination of user satisfaction levels regarding the Madrasati platform features.

Figure 4.4

Satisfaction with Platform Features



Users generally expressed high levels of satisfaction with all platform features. The features "Student assessment templates," "Homework," and "Name list" had median scores around or above 85. Most features also had a mode of 100, indicating that the highest frequency of ratings for most features was very positive.

Through assessment of the satisfaction rate for each feature, a comprehensive insight into how teachers perceive and experience the Madrasati platform was achieved. This approach allowed surpassing simple usage statistics to develop insights into the qualitative aspect of teachers' interactions with the platform. Features with high satisfaction rates may represent successful aspects of the platform that enhance teaching

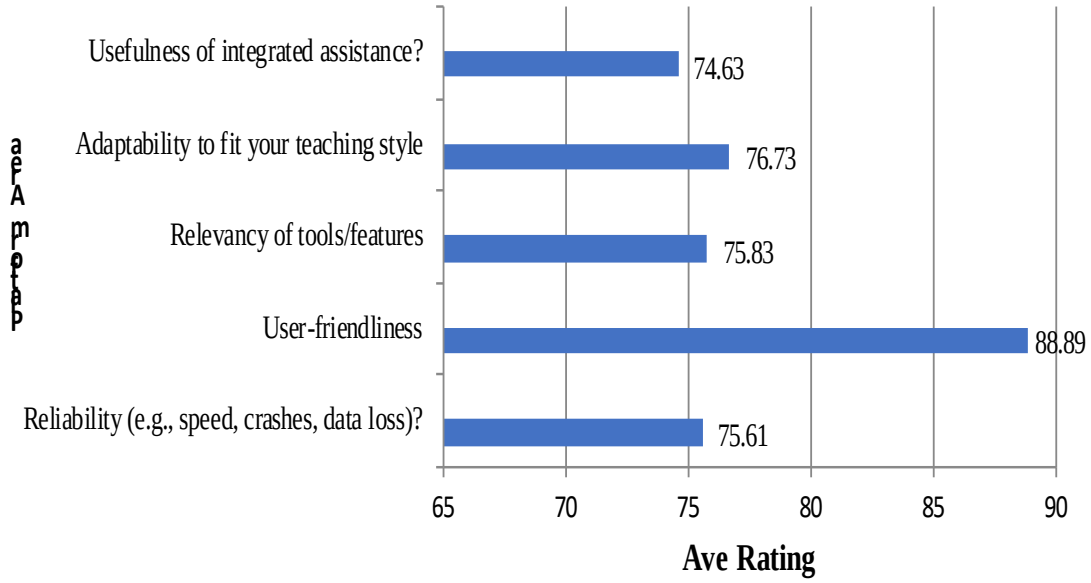
and learning, while features with lower satisfaction rates can highlight areas that may require improvement or further support. This research study focused on the user experience of educators, making it essential to consider their satisfaction and feedback. Analyzing satisfaction rates offers a user-centered perspective ; it also provides valuable insights into how the platform aligns with the pedagogical needs and preferences of teachers.

Madrasati Platform Ratings

In order to analyze the experience of teachers using the Madrasati platform, the next step was to analyze the performance or usability of the platform. Figure 4.5 represents an evaluation of the usability and performance of various dimensions of the Madrasati platform.

Figure 4.5

Madrasati Platform Ratings



Users rated the user-friendliness of the Madrasati platform very highly, with a mean score of 88.89. However, the rating for any other feedback on the platform was comparatively lower, with a mean of 60.54. This decrease might be because of inconsistency between teaching styles of the participants and features offered by the Madrasati platform. This decrease might also be because of limited customization. The Madrasati platform may lack flexibility and personalization options, according to participants' experiences and responses.

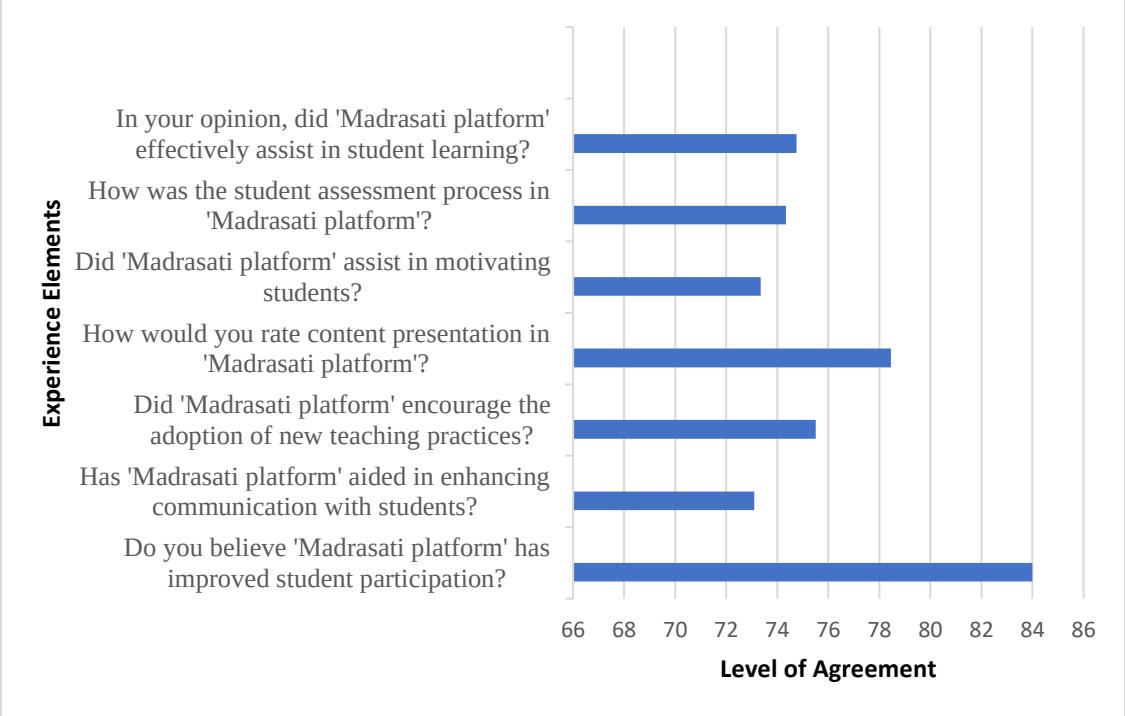
Results from participants regarding reliability, user-friendliness, availability of relevant tools, alignment or matching of features of the Madrasati platform with participants' needs and other feedback about the Madrasati platform were collected. Measuring the usability and performance of the Madrasati platform serves as an important component in understanding its effectiveness and impact in the context of teachers' experiences and roles while using the Madrasati platform. The evaluation of usability and performance allowed for assessment of the platform's reliability in terms of speed, stability, and data integrity, ensuring that it meets the fundamental requirements of teachers (i.e. study participants) and students. Additionally, examining user-friendliness aided in assessing how easily participants navigate and utilize the platform in their daily teaching activities, thereby directly influencing their overall experience. Moreover, measuring the availability of relevant tools and the adaptability of features to teaching styles provided insight into how well the platform aligns with pedagogical needs, thus promoting effective instructional practices.

Madrasati Platform Impact on Teachers' Experiences

Investigating how the Madrasati platform impacted the teachers' experience and role was one of the main aims of this research study. The participants were asked different questions about how the Madrasati platform impacted their experience regarding students (participants), communication with students, and students' motivation and adoption of new teaching practices. Furthermore, to gather more in-depth details about the impact of the Madrasati platform on teachers' experience, the teachers (participants) were asked if the Madrasati platform helped them present content effectively and if the platform effectively assisted them in fostering students' learning. Figure 4.6 represents the results about the impact of the Madrasati platform on teachers' experiences.

Figure 4.6

Madrasati Platform Impact on Teachers' Experiences



Teachers reported believing that the Madrasati platform has a positive impact on student participation, the mean score being 84.00. Most questions about the platform's effectiveness received mean scores in the mid-70s, indicating generally positive perceptions. The average response for each item was higher than 50 (out of 100) which suggests that on average teachers felt positively about each aspect.

While using any type of online platform, such as the Madrasati platform, teachers experience different types of issues related to communication with students, content presentation for students, motivating the students, and participation of students in the online learning process. All these aspects could possibly impact teachers' experiences while using the Madrasati platform; thus, they were considered important in this investigation. By evaluating whether the platform improved student participation, enhanced communication between teachers and students, encouraged the adoption of innovative teaching practices, and facilitated effective content presentation, the study aimed to examine the platform's ability to address fundamental challenges in education and the overall impact of the Madrasati platform. Additionally, investigating how the platform motivated students and streamlined the student assessment process provided valuable insights into its potential to engage learners and simplify the often improved task of evaluating student progress. Finally, the assessment of the platform's overall effectiveness in assisting student learning served as a holistic measure of its impact on the teaching experience. This multi-faceted investigation was thus essential in providing a comprehensive assessment of the role of the Madrasati platform in modernizing and improving teaching and learning practices.

Experience Sharing

The data presented share various individual responses to the experience of teaching using the Madrasati platform. The responses were in Arabic, but a thematic analysis in English has been provided below, classifying the sentiments and perspectives conveyed in the data. Overall, a positive experience is the dominant theme. The responses from participants were in Arabic and responses were subsequently translated into English for analysis and interpretation.

Many respondents seem to have a favorable view of the Madrasati platform. In assessing the Madrasati platform, feedback centered on several themes. Pertaining to "Ease of Use," users remarked positively on its simplicity, echoing sentiments such as "السهوله" (It is easy.), "جيدة وسهولة في الاستخدام" (It is good and easy to use), and "سهله متجدده" (It is easy and renewed). However, there were concerns like " سهولة الاستخدام ولكن صعوبة التعلم للطلاب" (There is an ease of use but difficulty in learning for students). The "Quality and Utility" theme saw endorsements like "جميلة ونقلة نوعية استفدت منها" (It is a good addition I benefited from.) and "عالية الجودة" (It is of high quality.). Users liberally employed "General Positive Sentiments," such as "رائعة" (It is wonderful.), "ممتازة" (It is excellent.), and "جميلة" (It is good.). Interactivity was praised with remarks like " جدا ممتعة وفيها مشاركة منوقبل الطالبات جدا رائعة" (It is very enjoyable with very wonderful participation by the students.).

Despite the overwhelming positivity, "Constructive Criticism" existed. Some believed there was "Room for Improvement," stating "المنصه نفسها تحتاج الى جهد اكبر لتغيير" (The platform itself needs more effort for change.). Others had an initial struggle but an eventual favorable outcome, expressing " الحمد لله كانت تجربة ناجحة ، في بداية الأمر استثقلتها ؛ لكن

مع مرور الوقت تغلبت على الصعوبات التي واجهتها" (Thank God it was a successful experience; at first, I found it burdensome, but over time I overcame the challenges I faced). The platform's “Integration with Other Platforms” was positively valued, with users mentioning its synergy with other software: " المنصة لوحدها جيده لكن بارتباطها مع مواقع وبرامج أخرى فهي رائعة مثل برنامج التيمز وبرامج ميكروسوفت وأدوبي وغيرها" (The platform alone is good, but its integration with other sites and programs like Teams, Microsoft, and Adobe make it great). “Benefits for the Educational Process” were highlighted with " تسهيل عملية التخطيط والتواصل مع الطلبة والتقييم" (It facilitates the process of planning, communicating with students, and evaluation.). Some feedback was “Neutral/Mixed,” described as " جيدة الى حدا ما" (It is good to some extent.) or "تجربة لابأس بها" (It is an okay experience.).

Most of the feedback about the Madrasati platform from the data received is positive, with many praising its ease of use, quality, and the benefits it brings to the educational process. Some responses highlighted initial challenges but indicated that these could be overcome with time. A few respondents provided constructive feedback, suggesting areas for improvement. Overall, the data suggests that the Madrasati platform is well-received among the majority of its users.

Madrasati Platform Effectiveness

The dominant response (64.0%) suggested that there was a significant influence on student learning due to the Madrasati platform, though the nature of that influence is not detailed. Much of the detailed feedback was positive. Responses such as "ممتاز" (It is excellent.), "رائعة" (It is wonderful.), and "جيدة" (It is good.) highlight the favorable view many respondents had. Altogether, it is clear that many participants believe the platform to be beneficial.

Some of the feedback was more conditional. Some feedback, like "جيده اذا استخدمت بشكل الصحيح" (It is good if used correctly.) and "ممتازه متى ماوجدت الدافعية للتعلم" (It is excellent if there's motivation to learn it.) implied the effectiveness of the platform depends on how it is used or the motivation of the students.

There was also neutral or mixed feedback. Responses such as "نوعا ما" (Somewhat.), "الى حد ما" (To some extent.), and "تختلف من طالب إلى طالب هناك من نجح في التعامل معها" (It varies from student to student; some succeed in dealing with it.) suggested that not everyone found the platform consistently beneficial.

There was also critical feedback provided. Some respondents had concerns, evident from comments like "ليس جيد" (It is not good.) and "ليس لها تأثير" (It has no effect.). However, this critical feedback was minimal.

Some comments offer more detailed observations or insights. For instance, "الطلاب الحريصين على التعلم استفادو منها كثيراً" (Eager students benefited a lot from it.) suggests that motivated students in particular gained from the platform. Similarly, "لكل الطلاب اللذين تابعو منصة مدرستي اضافت لهم افكار للدروس وتقدم للفهم" (For all students who followed the Madrasati platform, it added ideas to the lessons and advanced their understanding.) underscores specific benefits.

In brief, while the majority of responses are positive, there's a range of opinions, with some neutral or critical views. The effectiveness of the 'Madrasati platform' seems to depend on factors like student motivation and correct usage.

Features of the the Madrasati Platform

Based on the data provided which lists the features of the Madrasati platform perceived by users as aiding in the exchange of knowledge and promoting student autonomy, the following themes emerge:

Ease of use was a prominent theme. Responses such as "سهلة" (It is easy.), " سهله الاستخدام" (It is easy to use.), "سهولة الاستخدام" (There is an ease of use.), " سهولة التعامل معها" (It is easy to deal with.), and "سهولة ويسر التعلم" (There is ease and simplicity of learning.) emphasize the importance of a user-friendly interface, "سهولة الاستخدام" (There is an ease of use.).

A recurring emphasis on self-directed or autonomous learning exists in some feedback. Terms such as "التعلم الذاتي" (self-learning) highlight this point. For instance, students can actively engage in self-learning by cooperating with their fellow students according to the course requirements and their individual understanding. In such instances, collaborative efforts not only enhance collective knowledge but also allow each student to contribute unique perspectives, fostering a dynamic learning environment.

Communication appeared to be a key feature that users valued. Expressions such as "الاتصال السهل" (It allows for an easy communication.), "التواصل" (communication), and "سهولة التواصل" (There is an ease of communication.) point towards this, "التواصل" (Communication).

One aspect that was mentioned was the area of technology integration. The emphasis on effective use of modern technology like " امكانية استخدام التكنولوجيا الحديثة بشكل فعال" (Ability to use modern technology effectively) shows that the platform's integration

with up-to-date technology is appreciated, "امكانية استخدام التكنولوجيا الحديثة بشكل فعال" (Ability to use modern technology effectively).

Student collaboration was another aspect discussed by participants. Responses highlight the importance of peer interaction, such as "الطلاب يتبادلون المعلومات في مابينهم" (Students exchange information among themselves.), "الطلاب يتبادلون المعلومات في مابينهم" (Students exchange information among themselves).

Several responses hint at the platform's flexibility, such as "مرونة الوقت" (There is flexibility of time.), "حرية الطالب في التعلم" (student's freedom in learning), and "مرونة الوقت" (flexibility of time).

Feedback on Resources and Content of the platform was also valued positively. Responses emphasize the richness and availability of educational materials like " وجود المصدر التعلمي دئما" (constant presence of the learning source), "وضع الدروس" (placement of lessons), "وجود المصدر التعلمي دئما" (constant presence of the learning source).

There is mention of features that positively drive student engagement, such as "تنمية مهارات التواصل والاستطلاع" (developing communication and inquiry skills), " تنمية مهارات التواصل والاستطلاع" (developing communication and inquiry skills).

Some responses indicate dissatisfaction or a neutral stance like "لا شي" (nothing) or "لاتوجد" (does not exist), which suggests that there are users who might not find the platform as beneficial or might be unaware of its features.

In short, users of the Madrasati platform appreciate its ease of use, communication tools, emphasis on self-directed learning, technology integration, peer collaboration, and richness of its resources. However, as with any platform, room for improvement needs to exist to cater to a broader audience.

Challenges Encountered in the Platform

Analyzing the data provided requires considering both the quantitative distribution (frequency, percent, etc.) and the qualitative content of the responses to the open-ended question about the Madrasati platform in reponse to challenges.

The majority of the responses (65.9%) are grouped under the robust category, indicating that many respondents might have provided specific feedback or remarks without explicitly detailing them in this dataset. Many other responses are unique (with a frequency of 1), implying a wide variety of experiences and viewpoints.

The platform's connection with other software was another prominent theme. "ارتباطها ببرامج ميكروسوفت وبرنامج التيمز وموقع عين" (translation: It has connection with Microsoft programs, Teams, and the Ain site.) This comment points to potential integration or compatibility issues with other widely used software.

Phrases such as "تعليم عن بعد في الأزمات" (distance learning during crises) and "استمرار التعليم في الظروف غير العادية" (There is continuing education under unusual circumstances.) suggest that while the platform might have features to assist during crises, there might still be challenges in those circumstances.

Several responses highlight challenges related to Internet access and speed, such as "الانترنت" (Internet), "سرعة الانترنت" (Internet speed), and " صعوبة حصول بعض الطلاب على الانترنت" (It is difficult for some students to access the Internet).

Multiple responses praise the platform for its diverse educational experiences, like "التنوع في الخبرات التعليمية" (There is diversity in educational experiences.) and " التنوع في الخيارات التعليمية" (There is a diversity in educational choices). However, it is worth noting

that a focus on diversity could present challenges in standardizing the educational process.

A recurring theme is the ease of use and accessibility of the platform, with responses such as "سهولة الاستخدام" (Ease of use) and "يمكن الوصول لها بكل سهوله" (It can be accessed easily.). The emphasis on ease suggests that for many users, this is a significant feature, but any departures from this ease could pose challenges.

Some responses, like "تبادل المعلومات بسهولة" (We can easily exchange information.) and "تفاعل الطلاب" (Student can interact.) highlight the platform's strengths in promoting student interaction and autonomy.

Several respondents mention the absence of challenges or shortcomings, such as "لايوجد" (None) or "لا اعلم" (I don't know.). This feedback suggests a portion of the user base is satisfied with the platform or might not be fully aware of its potential features.

Several respondents mentioned their concern about lack of physical interaction: "عدم رؤية الطلاب والتواصل معهم جسديًا" means "I don’t see the students and physically communicating with them". This highlights the limitations of digital platforms, where physical interactions and the nuances of face-to-face communications are absent.

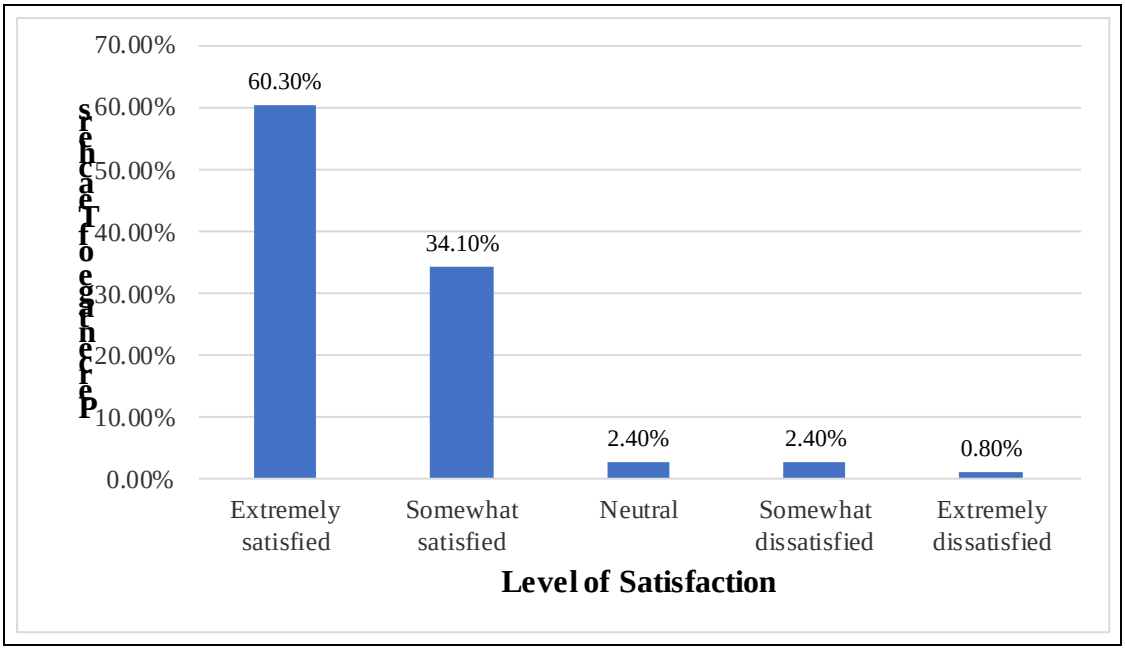
Feedback on the Madrasati platform was diverse. While some users applauded its features, especially in promoting a diverse educational experience and ease of use, others pointed out challenges related to Internet connectivity, integration with other software, and the limitations of digital interactions. This analysis provides insights into the potential areas of improvement for the platform while also recognizing its strengths.

Overall Satisfaction with Madrasati Platform

The overall satisfaction rate with the Madrasati platform was measured to assess the commitment level of participants using the Madrasati platform. Participants were asked a close- ended question, “Overall, how satisfied are you with the Madrasati platform?” Participants were allowed to choose between “Extremely satisfied”, “Somewhat satisfied”, “Neutral”, “Somewhat dissatisfied”, and “Extremely dissatisfied”. Figure 4.7 below presents the analysis results about overall satisfaction with the Madrasati platform.

Figure 4.7

Madrasati Platform’s Overall Satisfaction



A significant majority of users (60.3%) are extremely satisfied with the Madrasati platform, with an additional 34.1% being somewhat satisfied. This means that over 94% of users have a positive satisfaction level with the platform.

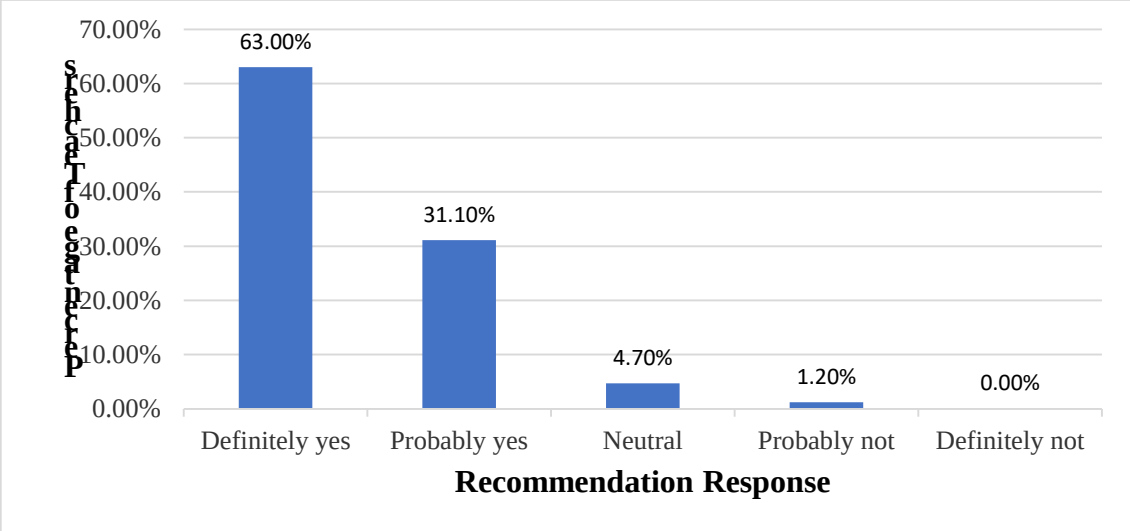
The assessment of overall satisfaction rate with the Madrasati platform was necessary because overall satisfaction reflects how participants perceive their experiences with the Madrasati platform as a whole. It offers insights into whether the platform aligns with their expectations and effectively meets their needs in the educational context. Overall satisfaction rate was measured because assessing overall satisfaction helps determine the overall quality and effectiveness of the Madrasati platform from the users' perspective. It provides a high-level assessment of whether the platform is delivering its intended objectives and helping the participants in the teaching process. Furthermore, overall satisfaction rates are often indicative of engaged and satisfied users. This, in turn, can contribute to user retention and loyalty, which are vital for the long-term success of educational technology tools like the Madrasati platform. The Madrasati platform may be used in the future by different educational institutions. The data regarding participants' overall satisfaction rate could be important to guide educational institutions for informed decision making related to implementation of the Madrasati platform.

Recommendations for the Madrasati Platform

Participants' willingness to recommend the Madrasati platform to others was another important aspect analyzed in this research study. In this regard, the participant was provided with the question, "Would you recommend the Madrasati platform to your colleagues?" Participants were provided with answer options of "Definitely yes," "Probably yes," "Neutral," "Probably not," and "Definitely not." Figure 4.8 below presents the analysis of data regarding Recommendations for the Madrasati Platform.

Figure 4.8

Recommendations for Madrasati Platform



Most users (63.0%) would definitely recommend the Madrasati platform to their colleagues, and an additional 31.1% would probably recommend it. This signifies that a combined 94.1% of users are inclined to endorse the platform to their peers.

The analysis of educators' willingness to recommend the Madrasati platform to their colleagues was conducted because willingness to recommend the Madrasati platform to colleagues is a strong indicator of user satisfaction. Teachers/participants who are satisfied with the platform are more likely to endorse it to their peers, suggesting that they have had positive experiences and believe in its effectiveness. Furthermore, understanding participants' willingness to recommend the Madrasati platform provided insights into its potential for broader adoption. If a significant percentage of users are open to recommending it, this can contribute to the platform's growth and sustainability.

Willingness to recommend the Madrasati platform to others was also measured to identify areas of improvement for the platform. Analyzing the responses can reveal areas that may need improvement. Participants who are less likely to recommend the Madrasati platform ("Probably not" or "Neutral") may have specific concerns or issues that need to be addressed to enhance user satisfaction.

In summary, the Madrasati platform has an overall positive reception among its users, with specific features and tools being highly valued and the platform's overall effect on teaching and learning perceived positively. It also enjoys high user satisfaction and recommendation rates, indicating its effectiveness and value to its user base.

CHAPTER FIVE
DISCUSSION

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The purpose of this research was to comprehensively examine the impact of the Madrasati platform, an online education initiative launched by the Ministry of Education (MOE) in Saudi Arabia, on high school education during the COVID-19 pandemic. With the sudden and unforeseen outbreak of the pandemic, the Saudi government enforced lockdowns, resulting in the closure of schools, universities and colleges. While higher education institutions were able to transition to online learning with relative ease, the situation was markedly different for high school students. The Madrasati platform was introduced as a response to the unique challenges faced by high school students and teachers in adapting to online education.

The aim of this research was to explore the multifaceted contributions of the Madrasati platform, focusing particularly on its role in supporting high school teachers and students. This study analyzed the platform's effectiveness in facilitating curriculum development, evaluating student progress, enabling effective communication, delivering virtual lectures, and proctoring online exams. Another purpose of this study was to evaluate content delivery, communication, and student assessment capabilities of the Madrasati platform.

By examining the experiences of teachers and students, this research identified both the advantages and limitations of the platform and the potential for its future enhancement. The findings of this research shed light on the impacts, both positive and negative, of distance learning via the Madrasati platform. The findings of this study also

provided valuable insights into the challenges encountered by educators during the transition to online education. Offering recommendations for improving the design and functionality of the Madrasati platform was also another important purpose of the study so for the enhancement of performance and instructional quality for high school teachers and students. This study aimed to provide guidelines for educators, policymakers, and educational institutions in Saudi Arabia and to contribute to the global understanding of online education in the context of high school settings with potential implications for the future of education worldwide.

Review of Important Findings

This study focused on understanding how often teachers used the Madrasati platform in their teaching during the COVID-19 pandemic. All teachers surveyed used this platform quite a lot. In fact, their average usage was very close to the highest possible score, nearly 100. This result means they relied on the Madrasati platform extensively. This high usage rate is important because it shows that teachers turned to the Madrasati platform as a vital tool when traditional teaching methods were disrupted by the pandemic. They adapted quickly to this digital solution to keep teaching their students. The finding suggests that teachers were dedicated to ensuring that learning continued even during a challenging and unusual situation. What does this mean for teachers and students? It is possible that teachers became very good at using the Madrasati platform, which could make their teaching more effective. Students might have been more engaged because the platform offers interactive features. The experiences and roles of the teachers in this study were influenced by their frequent use of the platform, making them more adaptable and innovative in the digital teaching world.

Given the unique circumstances and the necessity of distance learning, the high frequency of platform use implies that educators adapted effectively to the digital environment. It reflects their dedication to ensuring continuity in the educational process and maintaining engagement with students in such a challenging and unprecedented situation. This finding aligns with findings mentioned by Song et al., (2020) who found that online platforms were effective and reliable tools to continue the process of teaching and the only way to continue education. There was an increase in use of online educational platforms during the Covid-19 pandemic (Song et al., 2020). Chávez (2021) also found that there was an increase in the use of online educational platforms during the pandemic, and online platforms were effective tools for teachers as well as for students to continue the learning process.

This research also focused on understanding how teachers perceived the impact of the Madrasati platform on students' cognitive skills, particularly their understanding and applying ideas and concepts. To measure their perceptions, participants were asked to express their level of agreement with various statements related to the platform's effects on cognitive skills. The findings revealed that the majority of participants reported the Madrasati platform played a significant role in enhancing students' understanding of ideas and concepts. Teachers found that the Madrasati platform was a valuable tool in helping students grasp and internalize academic content. This finding suggests that the Madrasati platform may have contributed positively to students' cognitive development by promoting comprehension and knowledge retention.

Additionally, the second most common perception among teachers was related to the platform's impact on students' ability to apply the ideas and concepts they had learned

to new situations. Participants noted that the Madrasati platform was effective in improving students' skills in transferring their knowledge to real-world scenarios. This finding reveals that the Madrasati platform's potential to foster not just theoretical understanding but also practical application of academic content, a vital skill for students' future success.

The perceptions expressed by the participants regarding the Madrasati platform's influence on students' cognitive skills provide important insights into the educational value of this digital platform. The participants' perception that the Madrasati platform helped students in understanding ideas and concepts implies that Madrasati platform has a high level of effectiveness. In the context of cognitive skills, comprehension is a foundational step. Students must grasp the core principles and knowledge within a subject to build upon it effectively. The Madrasati platform appears to facilitate this crucial step, bridging the gap between teaching and learning. This finding highlights the platform's role as a supportive instrument for educators in helping students internalize complex concepts and theories.

Furthermore, the participants' second most common perception concerning the platform's impact on students—enhancing their ability to apply acquired knowledge in new situations—opens a gateway to a broader realm of cognitive skill development. While grasping theoretical concepts is pivotal, the ability to put these concepts into practice in real-life scenarios is equally important. This skill is not only beneficial in academic settings but also essential for students' future endeavors. It suggests that the Madrasati platform is not just a passive tool for content delivery but an active tool for cognitive growth which has helped teachers to improve the overall quality of teaching.

These findings are supported by the findings of the study conducted by Tan (2022). According to Tan, effective online teaching is when a teacher utilizes all available resources to improve the growth and development of students and enable them to connect their learning with the real world. Findings of this study showed that the participating teachers reported that the Madrasati platform enhanced the students' ability to apply their learned knowledge in the real world. These findings are also supported by findings of the study conducted by Wilson and Peterson (2006). According to these authors, quality teaching means improving critical thinking, communication and cognitive skills of students. The findings of the study conducted by Kim and Frick (2011) also supported the findings of this current. Kim and Frick described that teachers and student consider an online platform or system useful because it helped them recall concepts and ideas, create connection between concepts, formulate new ideas, and apply the ideas into new situations. The ratings for all these mentioned attributes are high in the current study which shows that the Madrasati platform helped the teachers to positively impact and improve the cognitive skill development of students.

In this study, the majority of users perceived the technologies and tools on the Madrasati Platform as extremely useful. This perception, which stems from the users' direct experience with the platform, suggests several potential factors contributing to its high usefulness rating. One key reason behind the high perception of usefulness of the Madrasati platform may be due to its ability to adapt to the specific needs of educators and students.

During the Covid-19 pandemic, the sudden shift to remote learning presented unique challenges. The Madrasati platform, with its versatile features and functionalities,

appears to have addressed these challenges effectively based on teachers' reports. Its adaptability in facilitating virtual classrooms, content delivery, assessment tools, and interactive features likely played a vital role in meeting the diverse educational needs of both teachers and students. This adaptability can significantly enhance user experience and utility. The Madrasati platform's high usefulness rating may be because of its user-centered design that prioritizes ease of use and accessibility. An intuitive interface, clear navigation, and user-friendly tools can contribute to a positive perception of utility. By offering educators and students a seamless experience, the Madrasati platform simplifies the adoption and integration of technology into their teaching and learning processes. A design that minimizes barriers and maximizes functionality can lead to high user satisfaction.

The high perception from teachers of the usefulness of Madrasati platform may also be closely linked to the platform's potential to enhance teaching effectiveness. The Madrasati platform provides educators with a wide array of resources and tools that can streamline instruction, facilitate student engagement, and simplify assessment. These capabilities are particularly valuable when transitioning from traditional in-person teaching to online formats. The usefulness of the platform in improving teaching efficiency and effectiveness might have been instrumental in fostering positive perceptions among its users (participants).

Another significant factor contributing to the platform's high usefulness rating is its impact on student engagement and learning outcomes. Online platforms that offer interactive features, such as discussion forums, multimedia content, and collaborative tools, can significantly enhance students' participation and comprehension. The Madrasati

platform, by promoting active learning and interaction, may have contributed to improved student engagement and, subsequently, better learning outcomes. The perceived usefulness of the platform in achieving these outcomes can be a powerful motivator for its continued adoption.

Adequate technical support and access to resources may also have contributed to the high perception of usefulness of the Madrasati platform. The Madrasati platform may provide necessary support and resources for its users which are useful to tackle challenges and problems which users face during teaching and learning process. The availability of training materials, helpdesk support, and a responsive technical team may have empowered users to make the most of the platform's features.

The positive feedback and experiences shared by educators can create a self-reinforcing cycle of perceived usefulness. When users find the platform to be beneficial and share their positive experiences, it can influence the perceptions of others. This cycle creates a supportive environment where the utility of the platform becomes more apparent and ingrained in the educational process. The Madrasati platform's alignment with pedagogical goals may also contribute to its high usefulness rating. If the platform supports teaching practices that resonate with contemporary educational objectives, it can garner favor among users. When educators and students see that the platform helps them achieve their educational goals, it reinforces the perception of its usefulness.

In conclusion, the finding that the majority of users reported the technologies and tools on the Madrasati platform to be extremely useful reflects a combination of factors, including adaptability, user-centered design, enhanced teaching effectiveness, positive effects on student engagement and learning outcomes, technical support, positive

feedback, and alignment with pedagogical goals. These factors collectively contribute to the high perception of usefulness among educators and students, emphasizing the platform's crucial role in modern education. High usefulness of the Madrasati platform also shows that Madrasati platform helped the teachers to improve their teaching quality and overall quality of learning.

This current study's findings are related to the findings mentioned by Jia (2010). According to Jia, online teaching is effective when it fulfills the specific needs of its learners. The fourth principle for improving quality of teaching through online platforms is that a teacher should adopt the curriculum that addresses learners' needs (Jia, 2010). The Madrasati platform helped the teachers in this study to design the lessons in accordance with the needs of students. That may be why they found the Madrasati platform helpful in fulfilling the principles of quality teaching.

Findings of this current study are also supported by the study conducted by Burns (2011). Burns found that an effective online platform for online teaching is one which enables online teachers to establish patterns between course activities and clear communication of expectations with students, create structure, and reduce stress for students, all leading to improved learning outcomes. Furthermore, an effective online platform should allow teachers to integrate various content sources, use diversified teaching approaches along with task orientation and guidance of student engagement, promote knowledge transfer, and enhance the learning experience (Burns, 2011). The participants of this current study may have perceived the Madrasati platform highly useful because it provided them with tools that an online platform should have for effective online teaching.

The Madrasati platform offers various features to support educators in their teaching and assessment activities. To understand which features were most used by participants, their usage patterns were examined. The findings revealed distinct preferences among the participants. The feature on the Madrasati platform that was used most by teachers was "Rubrics" (46.8%). This feature outlines specific criteria and expectations for assignments, assessments, or projects and helps students understand what is expected of them in terms of performance.

Some features like the "Library" and "Speed Grader" had no users, both recording 0.0%. The features "Quizzes" and "Assignments" had significant usage, with approximately 31.8% and 33% of participants using them, respectively. These features likely played a central role in teachers' instructional activities, involving assessments and student assignments.

The finding that certain features on the Madrasati platform were more commonly used than others provides valuable insights into how participants (teachers) engage with this online teaching tool and the factors that might influence their preferences. The popularity of the "Rubrics" feature suggests that these participants valued a standardized and structured approach to grading and assessment. Rubrics provide a clear and consistent framework for evaluating students' work, ensuring fairness and transparency. Teachers might find this feature particularly useful in promoting equitable grading practices and providing constructive feedback to students. The high usage of the rubrics feature indicates a commitment to maintaining assessment integrity and offering students clear expectations.

The absence of users for the "Library" and "Speed Grader" features could be attributed to several factors. It is possible that participants in this specific context did not find these features relevant to their instructional needs during the period of the study. Alternately, they might not have been fully aware of the capability of these features or how to effectively integrate them into their teaching practices. This finding highlights the importance of offering participants (teachers) comprehensive training and support to ensure they can use all available tools effectively to enhance their teaching experience.

The relatively high usage of the "Quizzes" and "Assignments" features indicates the central role these features play in participants' instructional activities. "Quizzes" and "Assignments" are essential for assessing student learning and progress. They facilitate the creation, distribution, and grading of assessments, which are integral to the teaching and learning process. Participants' use of these features likely reflects their commitment to providing regular assessments and assignments to measure student understanding and promote active learning. The variations in feature usage might be influenced by factors, such as individual teaching preferences, subject matter, or the specific goals of educators. For instance, some participants (teachers) may prioritize regular assessments and assignments in their pedagogical approach, leading to higher usage of "Quizzes" and "Assignments."

These findings highlight the diversity of teaching practices and the need for flexible, adaptable online platforms, like the Madrasati platform. To enhance the overall effectiveness of the platform, it is essential to offer a range of features that cater to the varied needs and preferences of educators. Professional development and training programs can further educate teachers on the full potential of available tools, ensuring

they can make informed choices about which features align with their teaching goals. The differences reported in usage of features on the Madrasati platform may be influenced by various factors, including individual teaching preferences, subject matter, and familiarity with specific tools. Educators' choices reflect their commitment to maintaining equitable grading practices, promoting student engagement through assessments, and providing clear and constructive feedback. To enhance the effectiveness of the platform, it is crucial to provide comprehensive training and support to educators, ensuring they can harness the full potential of all available tools to meet their instructional needs.

These findings are supported by the literature related to effective online education and features of effective online platforms. According to Kerr (2011), the most common items and tools used by online teachers are grading, assessment rubrics, sources of content, and discussion. Another study that supported the findings of this current study was conducted by Kula and Nayak (2020). They found that while selecting any online technology for teaching, teachers look at different features and tools related to presentation of contents, assessment rubrics, library, speed grading, allocation of assignments, distribution of discussion topics and communication options, such as email and instant messaging with students. Grading, assessment rubrics, sources of content, and discussion were the most common features of the Madrasati platform that were utilized by participants of the current study because these features helped the participants (teachers) to make learning effective and useful for students.

After identifying the percentage of use of different features of the Madrasati platform, the satisfaction rate associated with each feature of the platform was analyzed. The satisfaction rates reported with different features of the Madrasati platform revealed

that users generally expressed high levels of satisfaction. Several features, including "Student assessment templates," "Homework," "Grades," "Curriculum chart," "Study units," and "Name list," received median scores at or above 85. The high levels of satisfaction expressed by users regarding the features of the Madrasati platform signify the platform's effectiveness and the positive impact they felt it had on the teaching and learning experience. The consistently high satisfaction rates suggest that the Madrasati platform is well-designed with a user-centered approach. This finding might be because the features of Madrasati platform align with the needs and expectations of educators and students, making their interactions with the platform efficient and productive. High satisfaction rates reflect the platform's successful implementation in addressing users' requirements, ultimately enhancing the overall teaching and learning experience. Features like "Student assessment templates," "Homework," "Grades," "Curriculum chart," "Study units," and "Name list" also contribute to the efficiency and convenience of various educational processes. Participants might find these features valuable for tasks, such as assessment creation, grading, curriculum planning, and student roster management. The positive feedback reflects their ability to streamline these essential activities, saving time and enhancing organization.

The very positive modal scores of 100 for many features indicate a widespread appreciation of the Madrasati platform's capabilities. These features may have played a central role in supporting teaching and learning activities. Participants and students may have experienced significant benefits from the Madrasati platform, which are reflected in their high satisfaction levels. High satisfaction may also indirectly reflect the quality of education delivered through the Madrasati platform. When users are content with the

platform and its features, it implies that the educational content and experiences provided are of high quality. Participants (teachers) might feel better equipped to deliver engaging and effective instruction, while students benefit from a positive learning environment.

The high satisfaction rates of the Madrasati platform resonate with global trends in the adoption of digital education platforms. As education increasingly integrates technology, user satisfaction becomes a critical factor in determining the effectiveness and success of such platforms. These findings reflect a positive response to the platform's alignment with the broader movement toward technology-enhanced education.

These findings are relevant to the findings of the study conducted by Rose (2018). Rose investigated many practices that promote a higher level of teaching effectiveness. The list includes monitoring online task submissions, providing timely reminders to students about assignment and exam deadlines, grading students' assignments and exams, communicating with students, and making necessary adjustments to the online class schedule and curriculums based on various circumstances. These are all proactive course management strategies (Rose, 2018). The high satisfaction level for the Madrasati platform indicated its effectiveness for online learning.

This current study found that teachers gave the Madrasati platform a high rating for user- friendliness. The high user-friendliness rating suggests that users find the Madrasati platform easy to use, which is a positive sign because it means that both teachers and students feel comfortable navigating the platform and accessing its features. When a platform is user-friendly, it tends to reduce frustration and helps users accomplish their tasks more efficiently. However, their ratings for reliability, relevancy of features, and integrated assistance were comparatively low. The low rating for

reliability indicates that users might have experienced issues with the platform's consistency and dependability. This result could mean that there were occasional technical problems, system crashes, or other disruptions that affected users' trust in the platform.

Reliability is crucial in an educational setting because students and teachers rely on technology to work smoothly and without interruptions. The low rating for the relevancy of features suggests that the users of the Madrasati platform may feel that some of the features offered by the platform might not align with their specific needs or expectations. This result could occur if the platform includes features that are not useful or necessary for its primary users. The low ratings for relevancy of features might also indicate that some features on the platform are not well-suited to the needs of educators and students. It is essential for the platform to align its features closely with the educational processes and objectives of its users. Low ratings for integrated assistance could mean that users had difficulty finding help or support when they encountered problems. Effective customer support and easily accessible resources for troubleshooting could be crucial in maintaining a positive user experience.

These findings are supported by the study conducted by Almaiah et al., (2022). These researchers found that system quality, service quality, integrated assistance, technology infrastructure, relevancy of available tools, awareness, management support, and high reliability are some important aspects that define user friendliness of online education platforms like the Madrasati platform. Users of online platforms consider an online platform highly effective and user friendly when it provides good support and functions related to these features (Almaiah et al. (2022).

The participants of the current study might have given high rating to the Madrasati platform for user-friendliness because the Madrasati platform offered them hese features. Participants showed high satisfaction and high rating for the Madrasati platform for user friendliness, integrated assistance, and availability of relevant tools/features. This finding is supported by the study conducted by Shishah (2021). In his study, Shishah found that the Madrasati platform is an educational technology tool that is designed to support teaching and learning activities in schools. The results of the study suggest that the Madrasati platform has a high level of usability, user-friendly features, and relevant tools that fit the needs of teachers (Shishah, 2021). Thus, the user satisfaction and high ratings given to the Madrasati platform in this study align with the findings of Almaiah et al. (2022) and Shishah (2021), highlighting the significance of system quality, service quality, integrated assistance, technology infrastructure, tool relevancy, awareness, management support, and high reliability in defining the user-friendliness of online education platforms. The consistent positive feedback from participants indicated the effectiveness of the Madrasati platform in providing a user-friendly experience, particularly in terms of integrated assistance and the availability of relevant tools and features.

Regarding the Madrasati platform's impact on teachers' experiences, this current study found that most of the participants described that the Madrasati platform positively impacted their teaching experiences. Participants reported that that Madrasati platform was useful in improving students' participation, adaptation to new technologies, and content presentation. The improvement in students' participation through the Madrasati platform suggests that the platform offers features or resources that engage students and

encourage their active involvement in learning. This can lead to a more interactive and dynamic classroom environment, which is generally considered a positive aspect of teaching. This finding also suggests that the. platform provides resources and tools that make it easier for both teachers and students to navigate the digital landscape. The platform's positive impact on content presentation indicates that it assists teachers in delivering their lessons more effectively. It could offer features that make it simpler for teachers to organize and present educational materials. This is significant as effective content delivery is a fundamental aspect of teaching. The rating for these elements of teaching experience was high.

This finding is also supported by the literature about the Madrasati platform and its impact on teaching quality and learning outcomes. Alkinani and Alzahrani (2021) found that the Madrasati platform positively impacted the teaching experiences of teachers throughout Saudi Arabia. They also found that teachers think that the Madrasati platform positively impacted their teaching experience because it improved the students' academic outcomes and was a successful platform that increased the motivation level of students in different courses. Furthermore, the Madrasati platform enabled the teachers to increase overall participation of students in learning activities from diverse backgrounds (Alkinani & Alzahrani, 2021). All of these findings mentioned are relevant to those of the current study.

Communication between teachers and students is an important function of any online learning platforms, like the Madrasati platform. The Madrasati platform was assessed for the quality of its communication.

The rating of the Madrasati platform for teachers' experience related to communication with students and motivating the students was relatively low. The participants were asked to rate the Madrasati platform as to "how it was easy to communicate with each other and with students while using the Madrasati platform." The result shows that the overall rate was relatively low compared to other aspects related to teachers' experience. This finding suggests that communication tools on the Madrasati platform were not meeting the expectations of teachers. It could be that the tools provided were not as user-friendly or versatile as needed. Effective communication is a critical element of teaching, and if the platform does not support this process adequately, it might result in lower ratings.

Motivating students is a key challenge in education. The lower rating in this category indicates that the platform might not provide adequate features or strategies to help teachers motivate their students effectively. If the platform lacks elements that inspire enthusiasm and active participation, it could lead to students being less engaged in the learning process. No supporting literature was found regarding the effectiveness of communication tools of the Madrasati platform.

The findings that were obtained from quantitative data were confirmed by the qualitative data analysis. Regarding the teachers' experience on the Madrasati platform, most participants described that the Madrasati platform positively impacted their teaching experience. Concerning the effectiveness of the Madrasati platform, the teachers' most common theme was that the Madrasati platform was very effective. With respect to usefulness, ease of use was their most prominent theme. For integration of new

technologies in the Madrasati platform, participants revealed that integration of technologies was high which makes it an effective platform.

The alignment between the findings obtained from both quantitative and qualitative data analyses, where almost identical results were observed, reinforces the robustness of the findings and indicates a strong consensus among the research participants. The consistent finding that most participants described the Madrasati platform as positively impacting their teaching experiences, whether from quantitative surveys or qualitative interviews, indicates the platform's value in enhancing the teaching process. This alignment suggests that the platform is making a unique and important difference in how teachers perceive and carry out their work. The common teacher response that the Madrasati platform was "very effective" suggests that the platform is meeting its primary objective of aiding teaching and learning effectively. This alignment implies that participants have a high level of satisfaction with the platform's overall performance. The platform's effectiveness is likely resulting in positive outcomes for both teachers and students.

The theme of "usefulness" being closely related to "ease of use" highlights the importance of a user-friendly design. It suggests that participants appreciate a platform like the Madrasati platform because it is intuitive and easy to use, making it easy for them to integrate into their teaching practices. The high satisfaction with the Madrasati platform's usability could be attributed to its design and functionality, which align with the preferences and needs of the users. The finding that participants revealed a high level of technology integration in the Madrasati platform and considered it highly effective indicates that the platform is keeping pace with the demands of the digital era. The

alignment between the effectiveness and integration of technologies implies that participants appreciate a platform that embraces modern tools and resources, enhancing the learning experience.

There are different possible reasons for this alignment in findings from qualitative and quantitative analysis of the data, such as platform quality. These teachers' reports indicated that the Madrasati platform appears to be well-designed and equipped with features that support teaching and learning effectively. The platform's high quality and alignment with user needs contribute to the positive findings. It might be because the developers of the Madrasati platform considered user feedback and requirements during the design and improvement process. A user-centric approach is more likely to lead to a platform that aligns with users' preferences and needs. The consistency between quantitative and qualitative findings might also stem from a genuine consensus among research participants. They may have similar experiences and perceptions of the platform, leading to the same results from different data sources.

In summary, the alignment between quantitative and qualitative findings suggests that the Madrasati platform is highly effective, user-friendly, and well-received by teachers. This alignment can be due to the platform's quality, its user-centered development approach, and the shared consensus among research participants regarding their experiences with the platform. It reinforces the platform's role as a valuable tool for teaching and learning.

Regarding the challenges encountered by participants while using the Madrasati platform, participating teachers reported that they faced different problems such as potential integration or compatibility issues of the Madrasati platform with other widely

used software, challenges related to Internet access, speed, and limitations of digital interactions. Some participants stated that there is absence of challenges or shortcomings. Despite the challenges faced by the participants in this study, most showed a high overall satisfaction rate (60.30%) for the Madrasati platform.

The finding that participating teachers encountered various challenges while using the Madrasati platform is important because it sheds light on areas where improvements or support may be needed. These challenges included potential integration or compatibility issues with other widely used software, difficulties related to Internet access and speed, limitations of digital interactions, and some participants mentioning the absence of challenges. The challenges related to the integration or compatibility of the Madrasati platform with other widely used software suggest that the platform may not seamlessly interface with the diverse software ecosystem that teachers rely on. This result could happen for several reasons: teachers often use various software tools for different aspects of their teaching, such as office applications, learning management systems, or assessment tools. If the Madrasati platform does not integrate well with these tools, it can create friction or restriction in the workflow. Compatibility issues might have arisen when the Madrasati platform undergone updates or changes that affect how it interacts with other software. Teachers may have experienced challenges when their existing software tools were not in sync with these updates. Lack of standardization could be another source of this challenge. If there are no standardized protocols or guidelines for integration, it can lead to compatibility problems. Different software may have different data formats, interfaces, or security requirements, making it challenging to ensure smooth interactions.

Internet-related challenges, such as issues with access and speed, can significantly impact the usability of the Madrasati platform. One factor that could contribute to these challenges is infrastructure disparities. In many regions of Saudi Arabia, Internet infrastructure may be underdeveloped or inconsistent. Teachers in areas with poor connectivity can experience disruptions, which hinder their ability to use the platform effectively. Device limitations could be another factor. The type of device and its capabilities can affect the user experience. Older or less powerful devices may struggle with resource-intensive online platforms, especially if high-speed Internet is required.

The challenges associated with the limitations of digital interactions highlight that online teaching and learning may not fully replicate the richness of face-to-face interactions. This concern can be due to lack of non-verbal cues. Online communication often lacks non-verbal cues, such as body language and facial expressions. It can hinder the teacher's ability to gauge student understanding and engagement accurately.

Technical problems like audio or video glitches can disrupt the flow of digital interactions, making it harder for teachers to maintain engagement and effectiveness. This is important as some participants mentioned the absence of challenges. This finding might indicate that they had relatively smooth experiences with the Madrasati platform, possibly due to high level of familiarity and preparedness. The participating teachers may have been well-prepared for online teaching and had previous experience with digital tools. They may have encountered fewer challenges because they were already proficient in using online platforms. Participants in regions with reliable Internet access and modern devices might have encountered fewer technical issues, contributing to a smoother experience. It is also possible that the Madrasati platform had made improvements over

time, addressing some of the earlier challenges. Teachers who joined later may have benefited from these enhancements. Also, the teachers who reported no challenge might not have utilized all the functions of the Madrasati platform.

These findings are supported by the findings of the study conducted by Shishah (2021). Shishah found that during the pandemic of Covid-19, the Madrasati platform had less integration with some other online tools which create a hindrance in online education. Furthermore, lack of teaching skills about online education and lack of access to high-speed Internet connections were also challenges faced by teachers using Madrasati platform (Shishah, 2021).

Regarding the satisfaction about the Madrasati platform among its users, Alkinani and Alzahrani (2021) also found that most of the teachers using the Madrasati platform mentioned a high rate of satisfaction with it. This finding is relevant with the finding of the current study concerning the satisfaction of participants using the Madrasati platform.

Limitations of the Study

One of the most important limitations in this study was associated with the sample size and its representation. While I aimed to include many high school teachers in the Jazan region of Saudi Arabia, it is important to acknowledge that the extent of my sample might not fully represent the diversity and heterogeneity within the broader Saudi educational landscape. The focus on the Jazan region, with its distinct cultural and geographical characteristics, introduced a potential limitation in terms of generalizability. The findings of my study may primarily reflect the experiences and perceptions of teachers in this particular region; thus, this research study may not be universally

applicable to teachers in other regions with differing educational priorities and contextual influences.

Moreover, the sample's representation might not have been entirely reflective of the broader population of teachers in Saudi Arabia. It is possible that the teachers who participated in the study had unique characteristics, experiences, or perspectives that made them more inclined to engage with the Madrasati platform. This could result in a sample bias, potentially skewing the study's findings. Additionally, the sample's composition could have been influenced by logistical considerations, such as proximity to urban centers and accessibility to the Madrasati platform, which might not have been fully representative of the entire population of teachers in the region.

Recognizing this limitation is essential when interpreting the results of this study. While the findings provide valuable insights into the experiences of teachers using the Madrasati platform in the Jazan region, they should be applied with care when making generalizations about Saudi Arabia as a whole.

Another limitation of my study was related to the potential for self-report bias from the participants. The reliance on survey responses and self-reported data introduces the possibility of social desirability bias, where participants may have provided responses that they perceived as socially acceptable or favorable. This bias might have led to an overestimation of the positive impact of the Madrasati platform on teachers' experiences and roles. Despite the anonymity and assurances of confidentiality, participants may have been influenced by a desire to present themselves and their use of the platform in a more positive light.

Furthermore, the survey in this study gathered limited demographic information about the participants. While I did collect basic details, such as age, gender, educational background, and years of teaching experience, a more comprehensive understanding of the participants' diverse backgrounds and experiences was lacking. Factors like cultural background, prior experience with online educational technology, and the experience with the specific subjects or courses taught by the participants can all influence their experiences and perceptions regarding the Madrasati platform. The absence of this information may have limited the depth of analysis and the ability to explore potential variations within the sample. It is very important to keep in view these limitations when interpreting the study's findings. The self-report bias may have influenced the reported impact of the Madrasati platform, and the limited demographic information restricts a more important examination of the various factors that could affect teachers' experiences.

Directions for Future Research

An important direction for future research is about resolving the limitations of self-report bias and demographic information. In the description of the limitations section of this study, the potential for self-report bias created a significant challenge in understanding the real impact of the Madrasati platform on teachers' experience. In this regard, future researchers should consider using additional authentic methodologies that reduce the impact of self-report bias.

By triangulating data from various sources, future researchers can validate and cross-reference the findings, thus reducing the influence of socially desirable responses. Along with this, future researchers should prioritize collecting more extensive demographic information from participants. This approach may include collecting data

related to the teachers' cultural backgrounds, previous experiences with educational technology and online platforms, and specific subject areas they teach. Understanding how these factors interact with the use of the Madrasati platform could lead to a more accurate analysis of its impact on diverse teacher populations. Future studies might also consider employing intersectional analyses that examine how multiple demographic factors influence teachers' experiences about the Madrasati platform.

While this study provides an overview about teachers' experiences about the use of the Madrasati platform, it is important to investigate the long-term effects and sustainability of using the platform. In this study, data was collected about a specific time. Future research studies should be conducted to follow analysis of teachers' experience about the Madrasati platform over extended periods of time to understand how their experiences, roles, and perceptions evolve. A longitudinal approach could be very useful to reveal if initial positive impacts persist or if new challenges arise as technology and educational practices continue to evolve.

A comparative analysis is also another direction for future research studies in this area. Future researchers can organize comprehensive research studies to understand how the use of the Madrasati platform may differ from the use of other online education platforms. Investigating the unique features and tools of the Madrasati platform compared to other platforms can be a useful study area to provide valuable insights into the strengths and weaknesses of the Madrasati platform. Researchers can examine the factors that make the Madrasati platform appealing to teachers and identify areas where it may fall short in comparison. This type of future research in can better highlight the

weaknesses associated with the Madrasati platform along with particular suggestions to improve its overall effectiveness.

Another important area for future research is the impact of professional development and training programs related to the Madrasati platform. In the future, researchers can investigate how the provision of adequate training and support influence teachers' experiences and roles while using the Madrasati platform. Understanding the role of professional development in enhancing teacher preparedness and confidence in using the platform could contribute to more effective implementation of the Madrasati platform throughout different levels of education. Future research studies should also be conducted about policy and implementation aspects of the the Madrasati platform. These studies should focus on understanding how government policies, funding allocation, and administrative decisions influence the use and effectiveness of the Madrasati platform.

Conclusion

This research study investigated teachers' views about their use of the Madrasati platform during the Covid-19 pandemic in Saudi Arabia. The pandemic led to widespread closures of schools and prompted the adoption of online education as a response to the challenges posed by the health crisis. The Madrasati platform, launched by the Saudi Ministry of Education (MOE), aimed to facilitate distance teaching and learning for high school students. With a focus on both quantitative and qualitative research methods, the study explored teachers' experiences with the Madrasati platform in content delivery, communication, evaluation, motivation, and promotion of student autonomy. Additionally, the research study also investigated the challenges faced by teachers in using the platform and its potential long-term impact on the education system. The

significance of the study lies in its contribution to understanding the role of the Madrasati platform in supporting high school teachers and students during a time of unprecedented educational challenges. The study's comprehensive approach, incorporating both qualitative and quantitative methods, aims to offer a deep understanding of the contributions and challenges of the Madrasati platform, exploring the way for recommendations to enhance online education in high school settings in Saudi Arabia and potentially influencing the broader discourse on the future of online education.

Educational leaders ensure that teachers and administrators are regularly trained on how to effectively use the Madrasati platform. Educational leaders should develop a sense of community among educators using the Madrasati. Encourage collaboration, sharing of best practices, and mutual support. Educational leaders should also customize the platform to align with the local curriculum and educational standards. This ensures that the content is relevant and directly applicable to the students' learning objectives. Educational leaders must also ensure that the Madrasati platform is accessible to all staff members and students, including those with diverse learning needs.

For policymakers in Saudi Arabia, the findings of my research study provide an important opportunity to inform and reshape educational policies, particularly in the context of online education and the utilization of the Madrasati platform. This research study highlights the Madrasati platform's potential as a transformative tool in addressing educational challenges, providing insights into its positive influence on teachers' roles, and also enhancing student learning experiences. It is important for policymakers to consider the recommendations resulting from this research because these recommendations encompass areas such as infrastructure development, professional

development for educators, and strategies to overcome challenges identified during the implementation of the Madrasati platform.

By incorporating these insights into policy decisions, policymakers can actively contribute to the ongoing evolution of the Saudi educational system, ensuring its resilience in the face of future challenges. Furthermore, this study also encourages policymakers to explore mechanisms for sustained support and improvement in the realm of educational technology to ensure an environment that aligns with the nation's educational objectives, future needs, and aspirations.

The implications of this research extend beyond the specific context of Saudi Arabia. The study contributes to the global discourse on the integration of technology in education and its impact on teaching roles and experiences. For example, the results of this research could guide the educational institutions toward other features required to make any online learning platform effective. As educational technology platforms continue to shape the landscape of teaching and learning, this study provides valuable insights into how these tools can be leveraged to enhance pedagogy.

In conclusion, this research study demonstrates that the Madrasati platform has the potential to be a transformative force in Saudi Arabian high school classrooms, supporting teachers in their roles and positively influencing student learning experiences. It also highlights the need for continued investigation and improvements in the field of educational technology, with the ultimate goal of ensuring quality education for all students. As the Saudi educational system evolves, the Madrasati platform represents a significant step towards achieving the country's educational objectives, and this study serves as a foundational exploration of its impact.

APPENDIX
IRB EXEMPTION

OAKLAND UNIVERSITY

Institutional Review Board

Date: June 27, 2023
Study #: IRB-FY2023-214
Study Tile: Exploring the Experience of Using the Madrasati Platform to Deliver Instruction Submission Type: Initial
IRB Decision: Exempt

Research Team: Abdullah Alsubaie, Julia Smith

Based on applicable federal regulations, the above referenced study has been determined to be Exempt, with the following categories:
Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Notes for Researcher(s):

Since the recruitment of participants will need permission from the Ministry of Education in Jazan, Saudi Arabia, you must obtain the permission from the ministry before the research can start.

This submission includes the following approved documents:

Principal Recruitment Script Teacher Recruitment Email Information Sheet
Survey

Letter and Consent Document:

This letter along with the IRB approved (date-stamped) consent document can be found in Cayuse in the Submission Details page under Letters and Attachments, respectively. Please make sure to use the most recent IRB approved version of the consent form in consenting participants.

Permission from Research Site(s):

Please note the following:

This IRB exemption determination letter means that this research has met one or more of the federal criteria for exemption per 45 CFR 46.104- Exempt Research. Before the research is initiated, permission to conduct research at a given site must be obtained from all research locations listed in the IRB submission. You must keep copies of all such permission letters for your files.

It is the responsibility of each researcher to follow all applicable policies and procedures of any outside institution where the research will be conducted.

Modifications:

Any changes to this exempt project must be reviewed by the IRB prior to initiation by submitting a MODIFICATION request. Do not collect data while the changes are being reviewed. Data collected during this time cannot be used in research.

Record Retention:

Exempt projects will be retained by the IRB office for three years after the last action on the project. You are approved to start the research. Please retain a copy of this notification for your records.
If you have any questions, please contact the IRB office.
Thank you. The Oakland University IRB

APPENDIX

SURVEY

Survey:
Please indicate your gender
(1) Mal
(2) Female

How old are you?
(1) Under 25
(2) 25-30
(3) 31-40
(4) 41-50
(5) Over 50

What is your employment status as a teacher?
(1) Internship
(5) Part time
(6) Full time

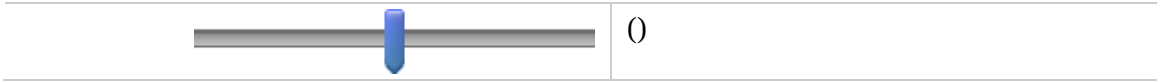
Do you work as a high school teacher at another school as well as this school?
(1) Yes
(2) No

How long have you been working as a high school teacher?
(1) This is my first year
(2) 1-5 years
(3) 6 to 10 years
(4) 10 to 15 years
(5) More than 15 year

How often did you use the Madrasati Platform?

Always	Most of the time	About half the time	Sometimes	Never

100 90 80 70 60 50 40 30 20 10 0



For each statement, please indicate your agreement.
The use of Madrasati platform helps students to ...

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly Disagree
100 90	80 70	60 50	40 30	20 10 0

	() remember and recall facts and concepts
	() understand the ideas and concepts
	() draw connections among the ideas and concepts
	() apply the ideas and concepts in new situations
	() evaluate and critique ideas and concepts
	() formulate new ideas and concepts that build on course content

technologies and tools present on the Madrasati platform?
(16) Not at all useful
(17) Slightly useful
(18) Moderately useful
(19) Very useful
(20) Extremely useful

What features in the Madrasati platform did you use? Please select from the list below.

(1) Rubrics
(2) Other media
(3) Library
(4) Quizzes
(5) Course
(6) Statistics
(7) Discussions
_____ (8) Other (please indicate)
(9) Speed Grader
(10) Syllabus
(11) Announcement
(12) Grades
(13) Email
(14) Assignments
(15) People (Roster)
(16) Modules

For the features that you used, please indicate your satisfaction. If you have no experience with a feature, please check the N/A option.

Not Applicable	Very satisfied		Somewhat satisfied		Neither satisfied or dissatisfied		Somewhat dissatisfied		Very dissatisfied	
100	90	80	70	60	50	40	30	20	10	0

	() Rubrics
	() Other mdeia
	() Library
	() Quizzes
	() Course
	() Statistics
	() Discussions
	() Modules
	() Speed Grader
	() Syllabus
	() Announcements
	() Grades
	() Email
	() Assignments
	() People (Roster)
	() Other elements

How would you rate the Madrasati platform for:

Very good		Somewhat good		Neither good nor poor		Somewhat Poor		Very Poor	
100	90	80	70	60	50	40	30	20	10	0

	() Reliability (i.e., loads quickly, doesn't crash or lose data, etc.)
	() Navigating the interface
	() Availability of relevant tools/features/options
	() Adaptability of features for your teaching style
	() Built-in help
	() Other

To what extent do you feel the Madrasati platform impacted the teachers' experiences?

A great deal A lot A moderate amount A little None at all

100 90 80 70 60 50 40 30 20 10 0

	() Increasing student engagement
	() communicating with students
	() Implementing new instructional practices
	() Delivering content to students
	() Motivating students
	() Evaluating students' performance
	() Helping students learn

Describe your experience in using the Madrasati platform while teaching?

_____

How do you feel the Madrasati platform impacted student learning?

_____

What features of the Madrasati platform were <u>useful</u> for knowledge sharing and student autonomy?

_____

What features of the Madrasati platform were <u>challenging</u> for knowledge sharing and student autonomy?

_____

W**hat is your overall satisfaction with the Madrasati platform as a system?**
(1) Extremely dissatisfied
(2) Somewhat dissatisfied
(3) Neither satisfied nor dissatisfied
(4) Somewhat satisfied
(5) Extremely satisfied

Would you recommend the Madrasati platform to your colleagues?
(1) Definitely not
(2) Probably not
(3) Might or might not
(4) Probably yes
(5) Definitely yes

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