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**Study of the impact of online learning on students of  
determination: A case study of private schools in Dubai**

دراسة تأثير التعليم عن بعد على الطلاب أصحاب الهمم : دراسة حالة في المدارس الخاصة في دبي

by

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of the requirements for the degree of  
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## **Abstract**

Technology remains an important facet that has revolutionized learning in modern society. Most innovations are intended to streamline operations and improve the quality of skills and knowledge delivered to students. Thus, online learning is becoming a reality. Despite these developments, there have been varying opinions concerning the contributions of online learning to the development of students of determination. Even though this method of teaching has been efficient in enhancing the learning experience of typical students, questions still exist when the approach is applied to students of determination. In particular, limited knowledge exists concerning the contributions of the online learning system to the achievement of special children's unique needs and inclusion experience. This study assessed the opinion of parents and teachers in Dubai, the UAE, concerning the inclusion experience and achievement of learners' needs through online learning in private elementary schools. Data was collected from a sample of 69 teachers and 25 parents who were directly involved in the learning experience of special children using virtual platforms. Important findings and invaluable recommendations are presented to help streamline this method of teaching, thus improving the learning experience of students of determination.

*Keywords:* Online Learning, students of determination, Education.

## المخلص

تعتبر التكنولوجيا جانبًا مهمًا في مجال التعلم في المجتمع الحديث. تهدف معظم الابتكارات إلى تبسيط العمليات وتحسين جودة المهارات والمعرفة المقدمة للطلاب. لهذا ، أصبح التعلم عن بعد حقيقة واقعة. على الرغم من هذه التطورات ، كانت هناك آراء متباينة بشأن مساهمات التعلم عن بعد في تنمية الطلاب أصحاب الهمم. على الرغم من أن طريقة التدريس هذه كانت فعالة في تحسين تجربة التعلم للطلاب الأسوياء ، إلا أن الأسئلة لا تزال موجودة عند تطبيق هذا النهج على الطلاب أصحاب الهمم..

قيمت هذه الدراسة رأي أولياء الأمور ومعلمين التربية الخاصة في دبي ، الإمارات العربية المتحدة ، فيما يتعلق بتجربة الدمج وتحقيق احتياجات المتعلمين من خلال التعلم عن بعد في المدارس الابتدائية الخاصة. تم جمع البيانات من عينة من 69 معلمًا و 25 من أولياء الأمور الذين شاركوا بشكل مباشر في تجربة التعلم للأطفال المتميزين باستخدام منصات افتراضية، حيث تم تقديم نتائج مهمة وتوصيات للمساعدة في تبسيط طريقة التدريس هذه ، وبالتالي تحسين تجربة التعلم للطلاب أصحاب الهمم.

.الكلمات المفتاحية: التعلم عن بعد ، الطلاب أصحاب الهمم ، التعليم

## **DEDICATION**

I dedicate my dissertation to my beloved parents, Bassam and Ilham, my lovely husband Ibrahim and my adorable children Lilya, Eyad and Eyas, who have supported me throughout the process. I will always appreciate all they have done. You all are the source of inspiration and encouragement for me.

My deep gratitude, respect and thanks are dedicated to my supervisor Prof. Eman Gaad.

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## **Chapter 1: Introduction**

Technology is one of the aspects that have influenced virtually every field in modern society. With the increasing innovation and development of modern technology, individuals are moving to embrace these advances to improve their lives. Notably, each technological development presents numerous benefits to people. Their effective utilization plays a significant role to enhance performance and promote productivity among people. However, any inappropriate use of these modern technological developments may lead to detrimental effects. In most cases, concerned parties tend to capitalize on the opportunities presented by technology while mitigating any undesirable outcomes. Such practices improve the quality of life and facilitate the overall well-being of the people.

A critical analysis reveals that the internet is one of the primary technologies that have revolutionized processes in modern society. Coupled with other advanced technologies, the internet has improved communication, linkage, and interactions among people. It has also presented opportunities for individuals to operate remotely, thus opening the world to greater social and economic activities (Ogutu, 2017). In this view, contemporary learning institutions have moved to utilize technological developments in their operations. This approach is intended to improve the learning process, enhance the learning experience, and ensure that each individual has access to education. Typically, institutions and other stakeholders in the education sector collaborate to design and implement various approaches intended to streamline learning. Some of them encompass the integration of technology, especially the internet and other modern communication devices, into the education system to achieve the desired objectives for all learners irrespective of their physical and developmental status (Arif & Gaad, 2008). In this regard, this research paper intends to evaluate the impact of online learning on students of

determination. It also focuses to determine whether online learning supports the inclusion of students of determination and helps them attain desired academic outcomes.

### **Overview of Online Learning**

As already noted, the internet has revolutionized interaction and linkages among people. Internet technology has advanced from being non-existent to being one of the largest and most accessible information hubs across the world. As the internet and other modern technologies continue to influence communication, business, socialization, and knowledge acquisition, people have designed appropriate approaches to capitalize on the presented opportunities. In this regard, technology has revolutionized traditional classrooms and changed the face of education not in the United Arab Emirates but also the rest of the world. This element continues to influence availability and access to information among students.

It is fundamental to note that online learning is a relatively new ideology in the education sector. In its basic form, it refers to the electronically supported learning process that utilizes the internet and other computer-aided technologies to facilitate the interaction between teachers and students. This interaction method provides the foundation for the distribution of learning material and evaluation of students' academic progress. In most cases, learners use home computers, mobile devices, and other internet-enabled devices to connect to virtual classrooms, thus interacting with other students in the same course (Arif & Gaad, 2008). This learning process contrasts traditional classrooms that require students to attend brick-and-mortar institutions to acquire knowledge. The elimination of the physical presence and other barriers that are evident in traditional classes highlights the significance of online/distance learning in modern society.

The evolution of online learning has been following technological developments. Even though some forms of distance learning were recorded in the early 20<sup>th</sup> century, it was until 1982

when the first online learning emerged (Tabrez, 2020). During the time, the Western Behavioral Sciences Institute used diverse computer conferencing systems to deliver educational material to business executives. As internet technology progressed, other institutions began to offer educational programs to their learners. For instance, the University of Phoenix integrated a computer-based education program in 1989 and the first internet web browser developed by the University of Illinois in 1993 formed the foundation for the success of online learning (Tabrez, 2020). Towards the end of the 20<sup>th</sup> century, many institutions in developed countries had developed fully online programs for distance learners. In the United Arab Emirates, the first e-campus, the Hamdan Bin Mohammed Smart University, was established in 2002 (Tabrez, 2020). This institution provided the foundation for the establishment of other online learning programs across the region.

Since its inception, and owing to advances in technology, the popularity of online learning has risen at a significant rate. The increasing acceptance of the internet and the growing utilization and dependence on modern technologies has promoted the establishment and success of computer-aided learning. For instance, only 8% of students were enrolled in at least one online course by 2000. However, this number rose to 20% and 30% by 2008 and 2013 respectively. This aspect aligns with the growing popularity of the internet and the increasing use of internet-enabled mobile devices across the world. Additionally, the current coronavirus pandemic has compelled institutions to transform into virtual learning spaces. Consequently, online learning remains indispensable in promoting knowledge acquisition and the ultimate academic achievement among learners from different regions.

## **Mode of Delivery in Online Learning**

The efficiency of online learning has elicited diverse opinions among people. Most critics argue that the quality of knowledge and information delivered through computer-aided platforms need to match the quality requirements of traditional classrooms. In this regard, institutions have designed online learning programs with the intent of realizing optimum results. Essentially, exclusive online education offers full learning programs to students through virtual spaces. Learners receive educational materials and interact with other students and teachers through online platforms without any physical presence in colleges or universities. A critical analysis reveals that this learning approach has proved effective in institutions of higher learning. However, similar results are yet to be attained in elementary, primary, and secondary schools across the world.

Due to the challenges presented by exclusively online learning, most institutions have resorted to a hybrid education system. This approach combines both online and traditional classrooms to deliver instructional material to students. In most cases, the online system supplements physical classes, but some institutions allow students to choose between online and brick-and-mortar classes. In this system, learners who may not be able to attend traditional classrooms log into online platforms and attend such lessons virtually (Maastricht School of Management, 2020). In other cases, online courses may be integrated into a given educational program as a way of equipping students with invaluable skills needed in this information age. Such practices have remained invaluable in facilitating the learning process and guaranteeing student's increased and continued access to education.

Modern improvements in communication technology have improved the methods of delivery in online learning. The penetration of the internet into remote areas and the increasing

access to smartphones and other computer devices has facilitated connections among students. In this regard, online learning has improved flexibility and convenience compared with the traditional classroom setting. Given that this system allows students to interact with others regardless of the location, it has promoted diversity in the learning environment. This aspect is important in the modern world as it prepares students to be competent and efficient professionals of the twenty-first century.

It is fundamental to note that online learning materials can be delivered asynchronously or synchronously. According to Maastricht School of Management, (2020), the asynchronous learning environment supports the digital education acquisition process in which students are not necessarily required to log into the system at the same time. In essence, the instructional materials are provided by teachers through online platforms and students can access them at any given time. This approach gives greater flexibility to learners and provides an opportunity for students to seek and generate appropriate content for assigned learning activities. It also reinforces information processing and promotes interaction among learners. Some of the common processes that utilize this system include discussion board threads, e-mails, and untimed assignments among others. Although important, asynchronous learning may lead to students' feelings of isolation or disconnection from the rest of the class. This aspect may influence the quality of education and the ultimate outcomes among students.

Some institutions support synchronous learning. This approach requires learners to log into virtual spaces at the same time and interact in real-time. This system is similar to the face-to-face learning system, but it only takes place in online platforms rather than traditional classrooms. In most cases, video conferencing and other media sharing technologies are utilized to facilitate interaction and linkage among participants. Particularly, video chat enables teachers

and learners to exchange information and progress conversation in real-time. This approach enables learners to seek clarification in the case of a misconception and promotes the feeling of inclusion among participants. As a result, the method allows for a greater understanding of the content among students.

Considering the method of delivery and the number of participants, online learning can be classified into four distinct groups. These categories include the massive open online courses (MOOCs), synchronous massive online courses (SMOCs), small private online courses (SPOCs), and synchronous small online courses (SSOCs). MOOCs involve a large number of participants who learn asynchronously. This aspect allows participants to acquire knowledge at their pace and convenience. SMOCs allow a large number of learners to acquire knowledge synchronously and in real-time. SPOCs limit the number of participants, but each learner access the educational material asynchronously. Finally, SSOCs are common in modern education environments, and they allow a limited number of participants to log into online learning platforms in real-time and acquire knowledge at the same time, similar to traditional classes (Maastricht School of Management, 2020). Such lessons are limited in terms of period and allow for greater participation and autonomy among students.

It is fundamental to note that most institutions have built a learning management system (LMS) to facilitate online learning. Given that each institution has its unique teaching programs, they have established dedicated LMS to manage their students. This software is important in maintaining, delivering, and tracking the learning process in each institution (Ogutu, 2017). Typically, colleges and universities have succeeded in establishing secure and stable LMS. Even though elementary and secondary schools are yet to establish LMS that matches those of

institutions of higher learning, they are developing at a significant rate. Therefore, online learning in elementary schools is becoming an indisputable reality.

### **Special Need Children**

It is evident that every individual presents unique characteristics that define their personality. Some children are born differently, and they portray distinctive features that distinguish them from other learners. Such individuals, commonly referred to as students of determination, require specialized attention and specific support to live a typical life. Normally, the care provided to children diminishes as they learn to live independently. However, students of determination require varying degrees of care to facilitate their overall well-being. In most countries, including the United Arab Emirates, governments and other relevant authorities offer assistance to parents and guardians of students of determination to facilitate their typical growth (Arif & Gaad, 2008).. Much of this assistance focuses on enhancing access to medical services and providing the required assistive technology to those in need. Such interventions are intended to ensure that these children lead productive lives.

It is fundamental to note that various conditions and impairments contribute to students of determination. Mostly, physical impairment, illness, and cognitive or psychiatric problems influence these children's quality of life. Genetic disorders also contribute to the growing difficulties among children to lead a normal life. Some of these issues may be mild, but others may be severe that they may require continuous medical support and assistive living. Such children may require regular and consistent monitoring to prevent any undesirable events (Alghawi, 2017). For instance, children with mobility issues may require support equipment to help them move from one place to another. Those with communication impairment may also need appropriate assistive technology to communicate with others. Without such assistive



equipment and regular support, such children may encounter considerable challenges in living a comfortable life.

### **Education of students of determination**

It is fundamental to note that students of determination encounter learning difficulties. In most cases, their inability to communicate and relate with other students undermines their ability to acquire knowledge under typical education centers. In this regard, students of determination require specialized learning process tailored to meet learners' individual needs. For instance, some learners may require language therapy while others may require supportive interventions to lead a typical learning experience (Li, & Lalani, 2020). Thus, contemporary teaching practices are designed to accommodate the conditions of students of determination with the aim of developing and advancing their capacities.

A critical analysis reveals that various factors influence the ability of students of determination to learn. In most cases, their inability to communicate effectively hinders their potential to initiate, maintain, and advance conversations with both teachers and other students. As a consequence, learning in a typical school setting becomes a significant challenge. Some of the children may experience extreme behavioral issues that may hinder their level of concentration. Such problems may arise from genetic disorders or complications, such as autism, developmental dyspraxia, cerebral palsy, and other physical or cognitive impairments (Badr, 2019). These problems lead to learning difficulties among students of determination.

Most children with cognitive impairments require a specialized learning experience to develop their capacities. Given that such learners have issues in connecting and relating to others, they require specialized teaching experts to attain the required learning outcomes. Evidently, not all teachers are trained to offer specialized education to those in need. Thus, some

learners may be taught in schools dedicated to addressing their special needs. Some students of determination require more time and attention than others to grasp the content and advance from one learning stage to another. This aspect has led to the formulation of individualized education programs (IEP) to facilitate the delivery of instructional material to students.

The United Arab Emirates is one of the countries that have supported individualized education programs. It forms the foundation for the modification of the curriculum and the formulation of appropriate policies intended to improve learning. In most cases, students of determination require a tailored learning process that is designed to meet the expected education outcomes (Badr, 2019). This approach is based on the idea that each student has unique needs that require individualized attention to address them. In this regard, IEPs remain invaluable in elevating the learning experience of students of determination with the aim of developing their capacities.

### **Online Learning of students of determination**

The education system across the world has shifted to virtual spaces. Due to the evolving technological developments, and owing to the severity of the current pandemic, online learning has remained an appropriate alternative to traditional classrooms. In the United Arab Emirates, most learning institutions have utilized the available resources to transition their teaching system from brick-and-mortar classes to online platforms. Despite this development, delivering instructional material to students of determination remain an issue of interest not only in the region but also across the world (O'Mara-Eves, et. al., 2012). In this regard, concerned parties have focused to develop and implement appropriate interventions to enhance the learning experience of these children.

Overall, students of determination encounter significant challenges associated with online learning. In most cases, they need regular support from parents and guardians to access class material and navigate the learning management system. Some of them require consistent monitoring to ensure that they attend online lessons and participate in other learning activities intended to advance their knowledge and skills. These aspects mean that parents and guardian spend more time with their children, a case which may affect their socioeconomic status (Alborno, & Gaad, 2014). In other situations, the unique needs of each learner present a challenge to teachers conducting online lessons. Some students may require language therapy while others may need behavioral support to reinforce concentration during classes (Gaad, & Thabet, 2017). Most of these issues are easily handled in face-to-face learning, but they are difficult to address in virtual learning environments.

### **Research Problem**

Online learning remains a valuable concept that has improved access and facilitated knowledge acquisition among students across the world. Even though this approach is widely used in institutions of higher learning, it continues to gain acceptance and usage in elementary and secondary schools. The UAE recognizes the significance of incorporating online classes in modern society. As technology advances and the internet penetrate remote areas, virtual learning spaces are becoming a common phenomenon. Notably, the current COVID-19 pandemic has compelled all institutions to develop comprehensive alternatives to traditional brick-and-mortar classes (Li, & Lalani, 2020). This aspect has reinforced the relevance of the online learning environment.

Despite advances in technology, virtual learning spaces have presented diverse challenges, especially towards students of determination. As the UAE government focuses to

establish and maintain an education system that promotes inclusivity and offers unconditional learning to all students, there is a need to consider the unique characteristics and needs of special children. Notably, the UAE government and other local authorities have laid appropriate measures to facilitate access and improve the learning experience of students of determination. However, it is not clear whether these online learning mechanisms contribute to the achievement of the desired academic outcomes among learners with special needs.

### **Objectives**

The primary objectives of this study are;

- To determine the impact of online learning on the education of students of determination.
- To assess whether online learning programs contribute to the completion of the set curriculum for students of determination.
- To determine whether online learning facilitates the academic achievement of students of determination.
- To assess whether online learning supports the inclusion experience of students of determination.

### **Research Questions**

1. How does online learning impact the education of students of determination?
2. Does this learning approach reinforce special students' curriculum and academic achievement?
3. Does online learning support the inclusion experience of students of determination?

## **Brief Chapter Outline**

As already indicated, this research paper examines the impact of online learning on the education of students of determination. Given that these learners are likely to be excluded from the popular teaching practices, meeting their unique needs is important in reinforcing their experience and strengthening their potentials. In this respect, chapter two of this paper analyses the already published research and findings concerning the topic. Much of the information presented in this chapter entails the experience of special children with respect to online learning not only in the United Arab Emirates but also in the whole world. Chapter three shows the method used to collect and analyze the data. This section is important as it reveals the relevance and validity of the research findings. In chapter four, the results are presented followed by the discussion. Important trends, patterns, and findings are given in this discussion part. Finally, chapter five presents the conclusion, vital recommendations, and the possible limitations of the study.

## **Chapter 2: Literature Review and Theoretical Framework**

### **Literature Review**

The education of students of determination is one of the significant issues that have attracted the attention of scholars not only in the UAE but also in the rest of the world. As concerned authorities focus on improving the overall well-being of the people in society, addressing the status of students of determination is invaluable. Notably, education is a core element that determines people's social, economic, religious, and political prosperity. In this regard, addressing the learning needs of students of determination is indispensable in improving the socioeconomic status of this cohort.

The proportion of people living with diverse disabilities is increasing at a significant rate. This aspect arises from the increasing prevalence of physical and developmental impairment coupled with genetic disorders. Statistics show that more than half a billion people across the world have mental, physical, or sensory impairment (UNESCO, 2015). Such individuals encounter considerable challenges in integrating into society and hinder their ability to participate in activities intended to develop their respective countries. Further analysis reveals that more than 80% of people living with disabilities live in developing countries (UNESCO, 2015). This aspect aggravates their inability to access vital services, thus limiting their potentials. In this regard, governments and other concerned parties engage in diverse activities intended to improve the overall well-being and the quality of life of people living with disabilities.

One of the primary approaches that have been implemented by many governments, including the UAE, is academic empowerment. This strategy focuses on improving access to learning resources for people with special needs to improve their physical and cognitive capacities. Despite governments' commitments to improving education for disabled people,

findings show that most of the physically and mentally challenged children lack access to schools. A 2015 report by UNESCO shows that more than 140 million children across the world lack access to education. Girls and the disabled constitute the majority of this population, and the issue is worsened by their deteriorating socioeconomic status. Some of these children who manage to enroll in various schools do not receive adequate and quality education compared to their counterparts. Such issues show that relevant authorities need to design and implement appropriate policies aimed at increasing access and the quality of education of students of determination.

One of the primary policies that have focused to improve the learning experience of children with disabilities is the provision of inclusivity. Badr (2019) argues that inclusion in education is intended to combat discriminatory attitudes towards students of determination, build an environment that accommodates their needs, and achieving education for all. In most cases, governments consider the unique needs of each student to build an education system that is comprehensive and one that addresses these learning needs. Thus, inclusivity has provided the primary framework for action to enhance learning and skill acquisition among students of determination.

It is fundamental to note that the wider concept of inclusion was developed as a response to the special needs of schooling children. As the concerned parties focused on transitioning the education system to suit the needs of special children and those with learning difficulties, the idea of inclusion became evident. It provided a viable option that facilitated the quality of education offered to special children and creating a friendly environment that motivated them to explore their potentials. Initially, special education was offered as a supplement to the general education provisions. However, it evolved to become an entirely separate system that caters to the needs of

children with physical and developmental impairments. Despite challenges and oppositions, this special education sector has remained invaluable in meeting the educational needs of these children.

The development of special education has undergone through various stages, thus reflecting people's commitment to improving the well-being of special children. The approach was incorporated into mainstream education through the integration process. This process integrated special education into the popular education system, but the strategy proved inefficient due to the lack of organizational change. Essentially, schools and other learning institutions were not modified to meet the needs of special children despite integration. Experts realized that the structure of the curriculum and the rigid teaching methods hindered knowledge acquisition for children with special needs (UNESCO, 2015). Therefore, there was a need to re-conceptualize special education in contemporary society.

In order to achieve the desired objectives, the concept of inclusion has been improved to offer 'education for all.' This approach is based on the idea that all children, irrespective of their socioeconomic status, have a right to access basic education of good quality. This aspect further shows that concerned parties need to create a learning environment that enables students to acquire adequate knowledge. In this regard, contemporary learning institutions need to not only be inclusive but also be effective and friendly to children. This approach remains to be the foundational framework for the formulation of policies and education systems in various countries. They are designed to promote a child-friendly learning environment to facilitate access and quality of education.

The inclusion of children with learning difficulties in the education system remains the most significant process in modern society. Ogutu (2017) affirms that inclusion involves laying



appropriate mechanisms to enhance all learners' ability to achieve academic needs and participate in typical learning activities in conventional school systems. Essentially, this approach needs to be undertaken without segregation. Based on this view, substantial studies have shown that relevant authorities need to implement appropriate policies to shift the focus from altering people with learning difficulties to fit into society to transforming the learning environment to meet the needs of the disabled people (O'Mara-Eves, et al., 2012; Ati & Guessoum, 2010; Gaad & Thabet, 2017; Thabet, Gaad, & Abu-Ayyash, 2020). This transformation needs to encompass changing attitudes, providing support, and removing barriers to quality education. Whether the learning process occurs in traditional classrooms or virtual spaces, they need to portray the essential elements of inclusion, which encompass access, social justice, equity, quality, participation, respect, and democratic values among others (Ogutu, 2017). Such practices can solve the existing problems concerning the learning process of special children.

It is fundamental to note that most institutions have focused on promoting the well-being of all learners. Some of these institutions, especially colleges and universities, have resorted to offering online learning to students to improve accessibility and limit barriers. As noted, online learning originated in Western universities, but the method has been adopted by many institutions as an effective alternative to traditional classrooms. Appanna (2008) noted that online learning presents numerous benefits to both learners and instructors. Some of the highlighted benefits include increased access, better preparation of students, lifelong learning opportunity, and improved quality of learning. As technology and access to modern communication devices increases, online learning has become a common phenomenon

(Appanna, 2008). This system is adopted with minimal anticipation of barriers that would hinder the inclusion of students of determination.

The UAE is one of the countries that have embraced online learning for all its students. This system is intended to increase accessibility and improve the quality of education amid the COVID-19 pandemic. Additionally, the UAE government is committed to serving the interests of its people and enhancing their overall well-being. As the country moves to embrace ICT and integrate it into various processes, the education sector has been leading. With the increasing use of the internet and other technologies, online learning for all students has become a significant element. The approach has also been adopted to offer instructional material to special students in both elementary and secondary schools. As such the UAE government has designed educational policies and guidelines intended to enhance the learning experience of special children.

A critical analysis reveals that inclusivity in learning has been achieved in conventional schools. A study by Alborno and Gaad (2014) revealed that the government's enactment of the "schools for all" policy played a significant role in improving the experience of learners irrespective of their physical and cognitive development. This approach provided specifications for teachers to develop individualized educational programs to meet the needs of all learners. Using the 'Index for Inclusion,' the researchers determined that the prevailing education system in the UAE has led to the achievement of learners' milestones through the provision of a welcoming learning environment, access to adequate support services to learners, and reinforcement of positive characteristics that facilitate learning (Alborno & Gaad, 2014). This aspect has remained central to the performance and productivity of all UAE learners.

Access to instructional material among children living with disabilities is relevant in the UAE context. Essentially, many students at various levels of education are entitled to quality

education. In this regard, special children are also entitled to quality education through the virtual learning environment. Despite this development, substantial studies have shown that students of determination encounter significant challenges in utilizing online platforms for educational purposes. O'Mara-Eves et al. (2012) noted that special needs students encounter problems concerning curriculum access and the feasibility of the delivery approach. This aspect affects the quality of education delivered to children with learning difficulties through online platforms.

A critical analysis reveals that students of determination attain optimum outcomes when they receive consistent and adequate support services. When they transition to the virtual learning environment, parents and guardians play a significant role in helping them to navigate the learning systems and concentrating in the class. This aspect may be challenging for caregivers who may not have adequate expertise and skills to improve their children's learning experience. In this view, Thabet, Gaad, and Abu-Ayyash (2020) determined that supporting the parents of children with disabilities in the UAE through various educational programs enhances the well-being of both participants and their children. These findings are crucial and application in the e-learning environment. Given that some parents and guardians may not be able to understand the educational needs of their children, they can benefit from various support and training programs.

The ability of home-based caregivers to tend to the needs of special children is indispensable in facilitating online learning. Due to the varying needs of these children, teachers and caregivers need to coordinate in an effective manner to achieve the desired learning outcomes. Some scholars have argued that parents of students of determination need to receive behavioral support training to improve their children's quality of life (Gaad & Thabet, 2017). This training can be particularly important to children with various genetic and cognitive issues,

including Down syndrome, autism, and cerebral palsy among others. Equipping parents and guardians with these skills is important in meeting the educational needs of special children even during e-learning.

Contemporary advances in the UAE's education system have focused on reinforcing inclusion. Particularly, the 'school for all' policy has played a fundamental role to provide equal and quality education to all learners. According to Badr (2019), the attitude towards the successful delivery of instructional material to special needs students has changed considerably among UAE teachers. Since the implementation of the 'school for all' rule, teachers are becoming more tolerant and aware of the unique needs of each student, thus developing educational programs that are both inclusive and beneficial to learners. In some cases, the continued efforts to modify the learning environment to accommodate special children have improved perceptions and positive attitudes towards inclusion (Alvarado-Alcantar, Keeley, & Sherrow, 2018). Such aspects can stimulate the efficiency of online learning and promote positive outcomes among students of determination.

The provision of education through various channels is seen as an effective approach that acknowledges the diverse needs of learners. In most cases, relevant authorities have responded to these diverse needs by formulating policies and modifying the education framework to promote participation in learning and combat exclusion. Notably, inclusion is a continuous process that evolves with advances in technology and other human developments. Since many proponents of this ideology focus on identifying and removing barriers, online learning has remained integral in this process. Nevertheless, the comfort and the quality of the education gained by students of determination through e-learning are still debatable not only in the United Arab Emirates but also across the world.

## **Why Online Learning is Growing in Popularity**

E-learning is becoming one of the most indispensable aspects of modern society. As many people continue to access and embrace technology, computer-based learning is becoming a reality. Many governmental and private organizations have supported this education system as an effective approach that has improved access and removed barriers to learning. However, others contend that this method of teaching has impacted the quality of education given that learners do not get similar experiences as those in brick-and-mortar classrooms. This skepticism is important given that it forms the basis for the continued improvement of online learning for children with or without disabilities.

The popularity and acceptance of e-learning in the United Arab Emirates are growing at a significant rate. In essence, a number of factors have led to this phenomenon as many learners and teachers are resorting to this education system. In most cases, the increased flexibility and the availability of a wide selection of programs have formed the foundation for the development of online learning. Many programs are designed to meet the needs of each learner, and they are offered at the convenience of both students and teachers. This flexibility and diversity have motivated stakeholders in the education sector to recommend online learning.

The approach has also played a role in enhancing accessibility by removing barriers to other conventional education systems. E-learning traverses transnational boundaries and promotes diversity in terms of cultural and religious diversity. The virtual environment also allows learners and teachers to connect in real-time, thus promoting connection despite physical distances. Further analysis shows that online learning is cost-effective compared with the traditional education system. Usually, learners incur costs associated with acquiring the appropriate technology and sustaining connections through the internet. Therefore, online

learning improves accessibility and reinforces the education experiences of students with or without disabilities.

### **COVID-19 and Online Learning**

The novel coronavirus pandemic has affected the education sector across the world. Owing to the novelty of the virus and the severity of the infection, most governments have enacted stringent measures with the aim of safeguarding the safety and well-being of its citizens. Notably, the virus was first detected in the Wuhan city of China, and the first case was reported in December 2019 (Li & Lalani, 2020). Given that many health officials and other concerned parties did not understand the transmission and progression of the disease, the virus spread at a significant rate across the world. Consequently, the virus was declared a pandemic on 11 March 2020 by the World Health Organization (WHO). This declaration led to the mobilization of resources by various governments to protect their citizens.

The UAE became one of the first countries to record the first case of the novel coronavirus. The case was announced on 29 January 2020, prompting the UAE government to enact appropriate measures to mitigate the spread. Some of the policies had considerable implications for the education sector. For instance, most governments responded by shutting down schools to protect children and other stakeholders in the sector. This policy has led to more than 1.2 billion students being out of school globally (Li & Lalani, 2020). The UAE is among the countries that enacted this policy as an emergency response to the pandemic. This aspect has affected students' ability to acquire knowledge through traditional brick-and-mortar classes.

It remains unpredictable whether the conventional education system will remain unchanged after the pandemic. The indefinite closure of schools has prompted policymakers to design and develop safe alternative approaches to teaching. Among the most preferred methods,

online learning has remained the most preferred approach. Even though governmental agencies have developed guidelines for a safe re-opening of schools, the outbreak has played a significant role in highlighting the importance of e-learning in modern society (Maxwell, 2020). For instance, the UAE government has supported learning institutions' transition from conventional classrooms to virtual platforms in a bid to ensure continuity of education. As online learning continues to gain popularity, the delivery of instructional material to students of determination remains a challenge. Thus, relevant authorities have shown commitments to address this problem and facilitate the continued online learning of special children.

### **Literature Gap**

UAE education has undergone important transitions over the years to improve its quality and reinforce its significance in equipping learners with the necessary skills. This aspect has been important to the country's social and economic prosperity with respect to other nations across the region. Notably, the UAE's education is a four-tier system (Ati & Guessoum, 2010). Learners have to spend considerable time in kindergarten, primary, preparatory, and secondary institutions. Some of them can advance to institutions of higher learning, including colleges, universities, and vocational centers. Fundamentally, primary and secondary education is mandatory in the UAE, thus government-supported institutions are common in the region (Ati & Guessoum, 2010). As the demand for education has significantly increased in the region, private learning institutions have become important in filling the gap. This approach has improved the country's literacy level.

Traditional teaching methods are still prevalent in the country. Despite advances in technology and the availability of resources, traditional classrooms are still dominant. Nevertheless, the prevailing conditions have motivated stakeholders in the education sector to

rethink the traditional teaching method. For instance, the current pandemic has compelled learning institutions to deliver instructional material to learners through virtual platforms to mitigate the spread of the virus among students. In some cases, the increasing penetration of the internet and other computer-aided technologies revolutionized the education sector. In this regard, the comprehensive implementation of e-learning has remained invaluable in the country.

A critical analysis reveals that the government and other agencies have succeeded to implement online learning for students without disabilities. Given that such individuals do not require specialized support and attention, virtual learning environments have remained important. Given that the UAE government requires institutions to deliver inclusive quality education, most schools have moved to offer online learning for students of determination. This approach has remained significant in improving the learning experience of special children. Even though substantial studies have been undertaken with regards to the quality and experience of learners in online platforms, little has been done to analyze the inclusion of special children in this system. Particularly, there have been limited studies analyzing the experience of special children in elementary schools in Dubai with regard to online learning. Therefore, this paper seeks to examine this phenomenon and fill this knowledge gap.

### **Theoretical Framework**

Contemporary learning systems utilize various theories to make informed decisions concerning the offered quality of education. This paper utilizes Piaget's constructivist theory to assess whether special children receive the expected quality of education that meets their learning requirements. This theory proposes that learners actively engage in various practices to construct knowledge based on their experiences (Dagar & Yadav, 2016). The theorist further argues that since learning is an active process, social and cognitive interaction among students is



indispensable in meeting learners' educational needs. Based on this view, traditional brick-and-mortar classes offer an ideal environment that supports and motivates children to discover and acquire knowledge. As learning transitions to online spaces, there is a need to design innovative delivery strategies to increase interaction and connection between learners and teachers, especially those with special needs.

The transformative learning theory also plays a role in evaluating the relevance and significance of online learning to students of determination. This pedagogy requires learners to advance their critical thinking and engage in social action (Cranton, 2009). In this regard, interaction forms the basis for promoting inclusive education in society. As distance learning becomes a reality, student-student and student-teacher social interactions are impacted. The situation may get worse when it involves special needs learners, some of which require consistent monitoring and close attention to meet their learning needs. In this respect, online learning needs to be designed to address these challenges to improve the achievement of the desired educational outcomes.

### **Significance of the Research**

It is evident that online learning for special needs children is a relatively new field that has not been widely explored. As many scholars have delved into this topic, substantial knowledge and information have been generated. Much of these findings are directed towards improving the learning experience of these children and advancing their capacities. They are also focused on enhancing their overall well-being. In this regard, this paper contributes to the growing body of knowledge concerning the promotion of online learning among students of determination not only in the UAE but also across the world.

The UAE government is committed to promoting the ‘schools for all’ initiative through inclusive educational programs. This aspect is reflected in the implementation of this policy in various schools, especially in Dubai. Therefore, the findings of this research paper can form a foundation for policy formulation to improve the experience of students of determination in private institutions. It can help policymakers to evaluate the significance of this learning method in the region, thus making informed decisions. As a result, students of determination are like to meet their educational needs, an aspect that can promote their social and economic well-being.

## **Chapter 3: Research Methodology**

The primary objective of conducting research is to gain knowledge and insight concerning a particular issue or topic and come up with appropriate solutions to any emerging problems. In most cases, researchers use various approaches to systematically collect data, extract vital information, and synthesize findings to make meaningful recommendations. This approach is intended to advance knowledge concerning a given subject and find practical answers to any issue (Opoku, Ahmed, & Akotia, 2016). In this regard, selecting the most appropriate and accurate research methodology is indispensable in improving the relevance and validity of the findings. This aspect forms the basis for the selection of the most appropriate research design that can facilitate the achievement of the primary objectives.

It is fundamental to note that the primary objectives of this study were to determine whether online learning had a significant impact on the education of students of determination in the UAE, particularly in Dubai. The research also sought to evaluate whether this learning method contributes to the curriculum and academic achievement of special children, and how it supports their learning experience through inclusion. In this regard, this research was designed to obtain relevant data and information from participants to facilitate the synthesis of meaningful findings. Therefore, this chapter highlights the method used to conduct and complete the research.

### **Study Area**

This study is based in Dubai, one of the emirates of the UAE. Dubai is located on the coast of the Persian Gulf, and it borders the emirates of Abu Dhabi, Sharjah, Ajman, Ras Al Khaimah, and the country of Oman. Notably, Dubai city is the capital of the emirate, and it is ruled by Sheikh Mohammed bin Rashid Al Maktoum and governed by the government of Dubai

(Lawrence 2018). Overall, the emirate of Dubai has a population of more than 4.1 million people, but the city of Dubai has more than 3.3 million people, making it the most populous city in the region. A critical analysis shows that there are more than 200 private schools in Dubai, and primary and secondary education is compulsory (PwC Education and Skills Practice, 2019). Given that the UAE government places considerable emphasis on the quality of education, more students are enrolling in both public and private schools. Studies show that there are more than 281,000 students enrolled in private schools in Dubai, and 20% of them are special children (Lawrence 2018). Therefore, establishing an inclusive learning environment is essential in promoting the experience of learners and the ultimate quality of education in the region.

### **Research Design**

This study employs a cross-sectional survey design. This design entails collecting people's views, opinions, and attitudes at one point in time. In most cases, this approach is used to collect information concerning people's present attitudes and views with regards to an intervention or practice. It is fundamental to note that this study sought to evaluate the significance of online learning among students of determination in Dubai. It also explored whether this method of teaching contributes to special children's ability to meet their educational needs and learning outcomes. In this regard, obtaining subjects' present views about the matter, which is an essential element of a cross-sectional study, is important in making rational decisions. Thus, this research design was deemed appropriate for conducting the investigation.

### **Research Approach**

This study utilized the questionnaire data collection methods. In essence, two questionnaires were developed, which targeted two different stakeholders in the education sector. The parents' questionnaire was administered to collect the views and opinions of parents

concerning the learning experience of students of determination (Appendix 1). Fundamentally, parents spend significant time with their children, and this aspect has been reinforced by online learning. They even spend more time with their students of determination given that they need regular and consistent monitoring. Therefore, understanding their opinions is essential in evaluating the significance of online learning for students with special children.

The second questionnaire was administered to collect data from elementary teachers in private schools across Dubai (Appendix 2.). Most of the targeted teachers were delivering educational material to students of determination. Most of these teachers had received specialized training to provide education to special children in the traditional classroom environment. Due to the changing technological and socioeconomic conditions, learning has transformed into digital platforms. Therefore, teachers' views with regard to this learning process are essential. This aspect formed the foundation for the administration of the second questionnaire. It intended to collect elementary teachers' views, attitudes, and perceptions concerning the online learning process and how it contributes to the inclusion experience of students of determination.

### **Research Population and Sample**

This research targeted parents and teachers of students of determination in Dubai. As already indicated, there are more than 281,000 students in private schools across the region, and more than 20% of them require specialized attention (Lawrence 2018). Additionally, the number of teachers in private elementary schools is increasing at a significant rate. In this regard, a representative sample of 50 parents and 25 teachers was selected from the population. The intent was to obtain substantial evidence from the sample to help make accurate and valid inferences

concerning the status of online learning and its contribution to growth and development among children with disabilities.

### **Research Reliability and Validity**

This research is both valid and reliable. Given that the study administered questionnaires using an online platform to test views and opinions concerning online learning, it is arguable that responses were obtained from individuals who had access to the said technology under investigation. Therefore, the opinions given represented the overall views of individuals involved in the online learning of students with disabilities. Moreover, the reliability and validity of the data were enhanced by the inclusion of the Likert scale to provide a spectrum of experiences and the level of emotions among teachers and parents with regards to online learning. A form of internal consistency was also included in the questionnaires to reinforce reliability. More importantly, the method deployed to collect data is relatively cheap, faster, and robust. Thus financial constraints, which can considerably limit a study's reliability and validity, were eliminated.

### **Data Collection and Analysis**

Data was collected through the use of online questionnaires. The questionnaires were administered using Survey Monkey, and close-ended questions type was used. Notably, the questionnaires adopted the Likert scale design. This measuring instrument, which is sometimes called the satisfaction scale, gave a 5-point scale that depicted the degree of a person's feeling or attitude towards the questions. The range was from one extreme attitude to another, but a moderate or neutral option was also included. This data collection approach was deemed appropriate given that the study sought to gather people's opinions with regards to online learning for special needs students.

Initially, the survey targeted a representative sample of 50 parents and 20 elementary teachers in Dubai. However, a response of 25 parents and 69 elementary teachers was obtained after the questionnaires were administered using Survey Monkey (an online survey platform). Some of the questions provided five options, namely Strongly Agree, Agree, Neither Agree Nor Disagree, Disagree, and Strongly Disagree, to depict participants' attitudes towards a given question or statement. The collected data was analyzed using Microsoft Excel, and the output presented in a form of tables. For purposes of statistical analysis, the Likert scale was coded with numbers; strongly agree – 5, agree – 4, neither agree nor disagree – 3, disagree – 2, strongly disagree – 1. After coding, a mean and standard deviation was calculated to determine the population's overall attitude towards the question or statement, in which a mean above 3 depicted the general acceptance, and a mean below 3 revealed rejection of the statement. Other survey questions that did not use the Likert scale were analyzed using percentages.

### **Ethical Consideration**

This study took into consideration with regards to the ethics of treating human subjects and respecting their rights. Given that the questionnaires were posted online, parents and elementary teachers participated in the survey at will. Additionally, each response was treated private and confidential, and none of the participants undertook the study under any coercion or intimidation. The data was handled carefully with a critical consideration of the participants' privacy rights.

### **Strengths and Limitations of the Study**

It is evident that the study depicts important strengths associated with survey research design, especially when administering online questionnaires. Given that online survey platforms eliminate barriers associated with conventional survey systems and improve flexibility, the data

collected is robust and representative of the entire population under study. Additionally, the survey questions were easy to understand and provided a scale for participants to express their attitudes. This approach strengthened the accuracy of the data and its ultimate validity. Finally, this study design eliminated the constraints associated with time and financial resources. Such aspects reinforced the relevance and accuracy of the study findings.

This study used online surveys as a primary data collection tool. Therefore, the assessment may have been affected by the possible limitations associated with surveys. Notably, the participants may have given dishonest opinions, misinterpreted the questions, or gave responses with a hidden agenda. Some of the respondents may have incurred challenges to convey their feelings and emotions. Despite these limitations, it is assumed that the representative sample gave genuine answers to the questions, an aspect that can contribute to the accuracy, relevance, and validity of the study findings.



## Chapter 4: Results and Discussion

### Results

**Table 1: Tabulated Survey Results**

<b>Questions (Parents' Questionnaire)</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither Agree Nor Disagree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
No. 1	5 (20%)	11 (44%)	2 (8%)	6 (24%)	1 (4%)
No. 2	2 (4%)	14 (56%)	3 (12%)	5 (20%)	1 (4%)
No. 3	2 (8%)	7 (28%)	6 (24%)	7 (28%)	3 (12%)
No. 4	4 (16%)	10 (40%)	3 (12%)	6 (24%)	2 (8%)
No. 5	3 (12%)	4 (16%)	7 (28%)	9 (36%)	2 (8%)
No. 6	2 (8%)	6 (24%)	5 (20%)	10 (40%)	2 (8%)
No. 7	2 (8%)	11 (44%)	3 (12%)	9 (36%)	0 (0%)
<b>(Teachers' Questionnaire)</b>					
No. 3	1 (1.45%)	13 (18.84%)	5 (7.25%)	39 (56.52%)	11 (15.94%)
No. 4	2 (2.90%)	12 (17.39%)	4 (5.80%)	40 (57.97%)	11 (15.94%)

**Table 2: Calculated Mean from the Likert Scale**

<b>Questions</b>	<b>Mean (M)</b>
<b>(Parents' Questionnaire)</b>	
No. 1	3.53
No. 2	3.44
No. 3	2.92
No. 4	3.32
No. 5	2.88
No. 6	2.84
No. 7	3.24
<b>Teachers' Questionnaire</b>	
No. 3	2.33
No. 4	2.33

**Parents' Perception of Online Learning for students of determination**

As already indicated, parents form the primary caregivers that interact with students of determination during online learning sessions. In this regard, their opinion formed a critical component in understanding the status of online learning among special children. In the first survey question, the respondents were required to opine whether the curriculum for online learners was modified to meet special children's learning needs. A critical analysis shows that generally, parents feel that the curriculum is modified to meet special children's needs (M=3.53). Even though 28% of respondents feel that the curriculum is not adequate, the majority, 64% are satisfied. This aspect shows that the region's online education is appropriate for students of determination.

Given that parents helped their students to access online learning material, it was important to evaluate their experience with the learning management system. Overall, many parents feel that the various digital learning platforms made it easy for them to access the needed academic resources and information for their special children (M=3.44). Notably, more than 64% of parents in the region are confident that the existing online learning platforms are easy to use and enhance access to the learning material required by students of determination.

One part of the findings that raised critical questions is the inclusion experience of students of determination. It was evident that the majority of parents felt that their children were not included in the learning process (M=2.92), an aspect that influenced the quality of education and the desired outcomes among students of determination. The majority of parents (more than 64%) felt that the online learning system was not adequate to improve the inclusion experience of students of determination, an aspect that needs serious considerations to meet the needs of the "schools for all" initiative.

It is generally agreed that individualized learning programs play a role in contributing to the learning experiences of learners. Given that each student have various individualized needs, IEPs remain indispensable in promoting comprehensive learning. In this regard, it was important to assess parents' views concerning the level of achievement of learning outcomes according to children's IEPs. A critical analysis shows that many parents feel that the online learning environment leads to the achievement of special children's outcomes based on IEPs. The majority, more than 66%, have confidence in the system in promoting special children's achievement of important milestones as outlined in the given individualized educational programs.

One of the critical issues that became evident in the survey, based on the parents' perspectives, is that students of determination encountered significant problems communicating with their teachers and colleagues during online sessions ( $M=2.88$ ). The majority (more than 72%) argued that their children did not communicate with their teachers and peers in a manner that was adequate to develop their social skills. This issue was brought to light due to the lack of supporting applications and software programs that are designed to improve the experience of students of determination during online learning ( $M=2.84$ ). The parents revealed that the lack of these applications and software may have been a hindrance to effective communication between learners and their teachers. Even though learning management systems provided adequate access to learning material, they did not contribute to comprehensive linkage and connection between teachers and their learners. Thus, these aspects have undermined the significance of online learning in facilitating the holistic growth and development of students of determination.

It was important to assess the level of satisfaction among parents with respect to the online learning process, especially teachers' methods of delivering instructions to learners. Most

parents agreed that teachers used different techniques to keep their children included during online sessions (M=3.24). This aspect is motivating as it shows the country's progress in meeting the learning needs of students of determination. Since no participants strongly disagreed with the proposition that teachers used various approaches to include children in online education sessions, it is evident that some digital mechanisms employed by instructors in improving the learning experience of special children are effective.

Given that online learning is a relatively new phenomenon in the education sector, people have varying opinions with regard to its effectiveness. While some people consider it an indispensable method of improving learning, others argue that it is not adequate in ensuring the quality of learning. In this regard, it was essential to determine the prevailing opinion among parents concerning the most appropriate learning environment for their special children. The majority (48%) consider in-class learning only to be the most effective teaching set up for their children. Another 32% consider blending both in-class and online learning methods. Despite its significance, online learning only is less favorable among parents with special children. This aspect shows the level of progress and acceptance of online learning among students of determination.

It is evident that access learning material online can sometimes be challenging to individuals, especially when technical issues occur. Even though most people in Dubai, and the UAE as a whole, have access to the necessary technology that facilitates online learning, challenges associated with this learning method still exists. A critical analysis shows that parents faced multiple problems while supporting their children to navigate digital learning platforms. A significant number faced more than one problem, an aspect that needs a comprehensive address. most of them (80%) reported encountering challenges in keeping their children focused at all

times during the online session. Another 60% of parents reported having problems with providing one on one support to their special children, 44% had difficulties allocating enough time to support their children during online sessions, and 40% had problems to log in on time. Only 16% reported having no trouble or facing any issue during online learning. This aspect shows that even though online learning for special children is still a reality, significant challenges that affect the quality of education still exist.

It is widely acknowledged that special children require appropriate and comprehensive support to achieve their learning outcomes. This aspect is achieved in the traditional class setting through the support of professionals who have adequate expertise. However, the online learning environment is challenging, and teachers are not in control of the children's activities. In this regard, some special children may require the help and support of another person in the family to meet their learning outcomes. According to the survey, 44% were supported by their parents while 24% were helped by a guardian or a 'shadow teacher.' This approach was significant in promoting the learning experience and providing these children with the necessary support. However, a significant proportion, 32%, was left unsupervised. This aspect raises the question of whether such learners were able to achieve the desired learning outcomes. Given that some children may have required behavioral interventions, leaving them unsupported exposed them to significant problems that affected the quality of education and their ultimate learning experience.

### **Teachers' Perception of Online Learning for students of determination**

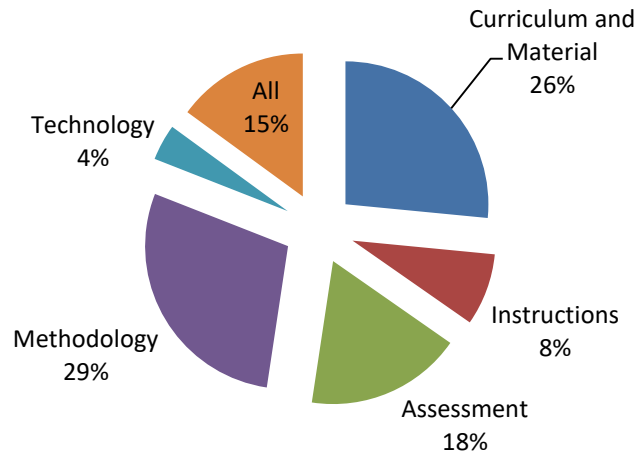
Teachers form an important population that can help researchers to understand the experience of students with learning difficulties. Given that these individuals are in close contact with the learners, they understand their needs better than other stakeholders in the education sector. Owing to this significance, it was important to obtain their views with regard to the importance

of online learning to students of determination. Particularly, these teachers were important in giving real-life experiences and the nature of connections with special children in the computer-aided learning environment.

One of the critical questions that provided the basis for analysis was to determine whether teachers received proper training before they embarked on online learning for special children. An in-depth analysis of the survey findings shows that a majority of respondents felt that they did not receive adequate training. 60.87% of the teachers in private elementary schools argued that the training they received prior to the implementation of online learning for students of determination was not adequate. Only 39.13% felt that they had been sufficiently prepared to conduct learning for special children through the online session. This trend is concerning to both learners and other stakeholders in the education sector as it affects the quality of education and learners' experiences.

Further, the study sought to determine teachers' opinions concerning the structure of online learning for special children. It was determined that many of the teachers needed an improvement in various elements of online learning. Notably, 60.87% wanted the methodology to be improved, 56.52% wanted the curriculum and learning materials to be modified, and 37.68% wanted an improvement in assessment, 17.39% on instructions, and 8.70% on technology. These findings show that most teachers were satisfied with the available technology that facilitated online learning. Only 31.88% wanted an improvement on all the highlighted areas of online learning. Such findings are core to the appropriate development of a comprehensive online learning curriculum for students of determination.

## Areas Needing Modification



Teachers were also required to give their opinion regarding the ease of monitoring and assessing the progress of students of determination. A significant proportion of respondents (70%) argued that it was not easy to monitor and assess the progress of special children using virtual platforms. This aspect shows that a majority of teachers are not satisfied with the program in terms of monitoring and evaluation compared with the conventional learning environment ( $M=2.33$ ). Teachers also revealed that there were no varieties of learning applications for learners with disabilities. This aspect reflects the prevailing attitude among teachers concerning the adequacy of applications and programs dedicated to improving the experience of students with learning difficulties ( $M=2.33$ ). Even though a majority of respondents felt that technology was adequate in facilitating online learning, it is evident that the available learning applications and programs are not diverse enough to offer a wide selection for special children.

The teachers also gave their views concerning the ability to achieve learning objectives in IEPs through online learning. This aspect was important in understanding the contribution of this education approach in advancing learners' skills and abilities. 39.13% had achieved some of the achievements, 37.68% had achieved most of them, and 11.59% had achieved all of the listed

learning objectives in IEPs. Only another 11.59% had felt that they did not meet or achieve any learning outcome as outline in individualized learning programs. This aspect shows that even though online learning has contributed to the achievement of desired objectives, still more needs to be done to optimize learning outcomes.

Most students of determination require substantial attention to meet the required learning outcomes. This aspect is challenging given that some of them may lose concentration or become tired during the learning process. Such cases are addressed in conventional school settings, given that teachers are adequately trained to handle such situations. In the online learning environment, teachers felt that the allocated session duration was not enough to achieve the desired learning outcomes. 66.67% of respondents felt that the session was short to allow the appropriate delivery of learning materials and the ultimate achievement of the desired outcomes. This element raises the question of the adequacy of online learning programs for students of determination.

As shown, parents encountered substantial challenges while using online learning systems for their special children. Similarly, teachers in private elementary schools across the region revealed that they encountered difficulties while delivering instructions to learners through digital platforms. 78.26% argued that students working independently at home posed a great challenge to the online learning process. Additionally, 73.91% showed that keeping students focused during online sessions was a considerable issue. Such problems may have arisen from the children's lack of supervision, the inadequate expertise among parents and guardians, and the lack of interventions that may have been necessary to maintain the students' attention. 42.03% of the teachers felt that cases of technical issues that students were unable to resolve independently impacted the online learning process. Such findings provide insight into the future improvement of the online learning system.



Inclusion forms the foundation for contemporary initiatives and policies in the education sector. Relevance authorities have sought to enact policies intended to establish an environment that promotes learning and leads to the achievement of learning outcomes among all students. In this regard, a majority of private elementary teachers in Dubai (75.36%) argue that inclusive education is not feasible in an online learning environment compared with a traditional classroom setting. Thus, based on the study, inclusivity, which is an important element of the UAE's 'schools for all' initiative, is not achieved through online learning. Such findings are indispensable to policymakers and stakeholders in the education sector.

The novel coronavirus has significantly affected the conventional learning process. Some of the mitigation measures have limited contacts among people, an aspect that has significantly impacted students of determination. In this regard, most teachers in Dubai believe that COVID-19 has significantly affected therapy sessions for students of determination. Given that most of these students depend on various interventions, including speech and behavioral therapy, for their overall well-being, the novel coronavirus has aggravated their situation. 31.88% of teachers believe that the lack of therapy sessions due to COVID-19 has strongly affected online learning, 30.43% argue that it has moderately impacted online learning, and 26.09% shows that the pandemic has slightly affected digital learning. Only 11.59% of respondents believe that the lack of therapy sessions due to the novel coronavirus does not affect online learning.

It is evident that online learning for special children has elicited divergent views among people. While some consider it an indispensable method of promoting learning, others consider it inadequate in facilitating learning for all students. Such sentiments are reflected in teachers' opinions concerning the suitability of online learning for special children. The majority (78.26%) considers this system unsuitable for students of determination and only 21.74% deem it

important. This aspect shows that online learning is less favorable among teachers when it involves students of determination.

### **Discussion**

Online learning remains an important system that has improved education in modern society. As technology and other computer-based innovations continue to advance at a significant rate, the education sector is also evolving fast. Moreover, the increasing usage of mobile applications and other internet-enabled devices has revolutionized linkages and associations among people, an aspect that has contributed to the growth of digital learning platforms. This study sought to determine how online learning affects the learning experience of students of determination, and if the system contributes to inclusion and the ultimate achievement of desired outcomes.

One of the primary questions that this study sought to examine was whether online learning had an impact on the education and learning experience of students of determination. A critical analysis reveals that this learning method is yet to achieve a significant positive effect on the learning experience of students of determination in Dubai. This aspect arises from a number of factors, including the lack of training among teachers prior to online sessions, lack of the required help and support to facilitate special children's learning process, and lack of monitoring during online classes. Some students miss their therapy sessions, especially speech and behavioral therapy, an aspect that has a considerable effect on their online learning experience. Such issues have a negative effect on special children's acquisition of knowledge and skills through digital platforms.

It is also evident that online learning is not reinforcing the curriculum for special children and their subsequent academic achievement. Even though parents may feel confident that this

learning method is leading to the fulfillment of special children's individualized education programs, insights from teachers show that the curriculum is not sufficient to advance these children's skills and capabilities. Consequently, the curriculum and learning materials, the methodology, and the assessment procedures need to be developed to enhance the relevance and significance of online learning for special children.

Finally, this study sought to determine whether online learning promoted the inclusion experience of students of determination. An in-depth analysis shows that this method does not support inclusion, which is an important element for the holistic growth and development of children. This aspect results from the lack of appropriate communication mechanisms between learners and their teachers. Essentially, the lack of diverse software and applications that reinforces interactions among special needs learners hinders their inclusion experience. Given that teachers do not have access or control of learners, they cannot initiate the required interventions for the student to remain socially connected. Thus, both parents and teachers agree that online learning does not support the comprehensive inclusion of students of determination in the learning process.

Promoting online learning for students with learning difficulties is an important approach that can improve desirable outcomes. However, this process needs to be undertaken with a critical consideration of the possible challenges that may arise as a result of using this method. The study has revealed some of the issues that parents and teachers face when helping their special children utilize online learning platforms include difficulty in keeping the children focused during online learning sessions, allocating enough time to support special children, regular monitoring and supervision, difficulty in assessing and evaluating students' progress, and other technical issues learners may not be able to resolve independently. These issues may have

been the reason why both parents and teachers prefer a conventional classroom setting for teaching students of determination or blend both traditional classrooms and virtual learning spaces to enhance learning outcomes among special children.

## **Chapter 5: Conclusion, Recommendations, and Limitations**

### **Conclusion**

Contemporary advances in technology and other computer-based innovations have revolutionized virtually every field in society. As people continue to gain more access to these technologies, they have developed new ways of linking and associating with others. In this regard, the education sector has been greatly influenced by modern technologies. In particular, advances in communication technologies and the increased penetration of the internet to remote areas have facilitated the evolution of the learning system. Notably, online learning has become increasingly prominent and acceptable in modern society. As people gain more access to computer-aided technologies, especially in the United Arab Emirates, the popularity of online learning has continued to grow. Therefore, this aspect formed the foundation for this paper.

Fundamentally, this study sought to investigate the contributions of online learning to the achievement of desired learning outcomes among students of determination. This method varies from the conventional classroom setting, given that face-to-face interactions are limited. Additionally, this teaching approach utilizes technology, especially the internet and other modern communication technologies, to facilitate connection and linkage between learners and their instructors. Various studies have shown that online learning is invaluable in promoting the learning experience of typical students. Some elements associated with this learning environment, including its high flexibility, relatively low costs, and its ability to eliminate physical barriers that hinder learning, have highlighted online learning's significance in society. However, similar findings are yet to be demonstrated when the same approach is used to teach and assess students of determination.

The study was based in Dubai, one of the populous cities in the United Arab Emirates. The primary aim was to assess whether online learning contributed to the inclusion experience of learners, thus reinforcing their curriculum and leading to the ultimate achievement of their desired learning outcomes. Notably, the UAE is one of the countries that have focused on establishing a learning environment that supports and meets the needs of all children. Its ‘school for all’ initiative has improved the government’s focus on improving the learning experience of students of determination. However, there are still questions concerning the effectiveness of online learning in meeting the desired learning outcomes. Given that contemporary events, such as the increased access to technology and the current COVID-19 pandemic, have highlighted the importance of online learning, it is essential to investigate how this method of delivering instructions impacts the learning experience of students of determination.

Through the analysis of parents’ and teachers’ views and perspectives of this learning approach, it was evident that online learning minimally contributed to the learning experience of students of determination. Given that this method eliminated face-to-face interactions among learners and teachers, it failed to meet the learning needs of each special child. Some of the children required therapy sessions and other supportive interventions to promote their learning process. Evidently, the conventional education setting provided the much-needed assistance given that teachers were trained to adequately handle students of determination. This element was lacking when the learning process was facilitated by virtual platforms, thus affecting the ultimate quality of education offered through the online setting.

Another essential finding is that the online learning environment did not promote the inclusion experience of students of determination. Both parents and teachers argued that inclusivity was difficult to achieve in virtual platforms, especially when it involved special

children. This problem arose from inadequate learning software and applications, insufficient computer-aided communication among students and with their teachers, and the inability of parents, guardians, and teachers to keep the children focused during online sessions. Such issues have led to the popular view that the traditional classroom system is more desirable in meeting the learning needs and academic achievements of special children compared with online learning.

### **Recommendations**

It is evident that UAE is one of the countries that are technologically advanced. Additionally, people have adequate resources to acquire the required technology to facilitate online learning. Despite these developments, online learning for students of determination has not been streamlined to facilitate the achievement of desired learning outcomes. In particular, its inability to promote inclusion and stimulate the learning experience of special children undermines its significance. Based on this study, it is important to make valuable recommendations to improve the learning experience of students of determination and contribute to their ultimate socioeconomic status.

One of the primary recommendations is for the ministry of education and other stakeholders in the education sector to offer adequate training to both parents and teachers of special needs. Given that a significant proportion of parents and teachers have not undergone essential training to facilitate the online experience of students of determination, they are unable to offer the needed support and assistance during learning sessions. In this respect, the government and other relevant authorities need to design and develop comprehensive training programs for parents, guardians, and teachers involved in the learning process of special children.

There is also a need to modify the curriculum and improve interactions among participants in virtual learning environments to enhance the inclusion experience of special children. In particular, there is a need to develop appropriate communication channels between learners and their teachers to facilitate connections and interactions. This resolution can benefit from the development of diverse learning software and applications to improve not only the access of educational materials but also the communication experience among participants. As already indicated, relevant authorities need to modify the curriculum, assessment procedures, and methodology to meet the unique needs of special children. Such improvements can be invaluable in facilitating the online learning experience of special children and advancing their capabilities.

### **Limitations and Future Studies**

One of the critical limitations of this study is that it was based in Dubai, and the findings may not be accurate if they are used to make generalizations across the UAE or the rest of the world. Given that technology and other practices vary from one region to another, it may not be appropriate to use the study findings in Dubai to design and implement educational policies in other regions. Thus, interested researchers may consider carrying out a nationwide study in the future to determine the contributions of online learning to students of determination.

Another important limitation of this study is that it used the opinions of teachers and parents to make inferences about the experience of students of determination. Even though this method is appropriate, it may not be accurate to depict the actual experience of learners with special needs. Therefore, there is a need for scholars to develop an appropriate research method that can be used to assess the actual experience of special children with regard to online learning. Such a study can give a more accurate picture of the contributions of online learning for special needs students.



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## Appendix

### Appendix 1: Online Learning for Student of Determination (Parents' Determination)

1. The teacher modifies the curriculum to meet your child's needs
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
2. You had easy access to all the needed academic resources and information for your child
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
3. Inclusion was demonstrated during online classes
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
4. All learning outcomes listed in your child's IEPs were successfully achieved in online learning
  - Strongly agree

- Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
5. It was easy for your child to communicate with their teacher and colleagues during online lessons
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
6. The school provided you with supporting applications and software programs for your child's learning needs
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
7. The teacher used different techniques to keep your child included during online sessions
- Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree

- Strongly disagree
8. From your experience, which of the following setups you find it more effective with your child
- In-Class learning only
  - Online learning only
  - Both combined
9. In case you face any of the following difficulties in online learning, please mark it
- Difficulty to login on time
  - Keep your child focused all the time
  - Providing one on one support to your child
  - Allocating enough time to support your child education
  - None of the above
10. Who monitors your child while they attend their online classes?
- The parents
  - A shadow teacher
  - No one, my child is alone while learning

## **Appendix 2: Online Learning for Student of Determination (Teachers' Perspectives)**

1. Did you receive proper training before conducting online learning?
  - Yes
  - No
2. Which of the following areas need more modification during online learning? Tick all possible answers
  - Curriculum and materials
  - Instructions
  - Assessment
  - Methodology
  - Technology
  - All the above
3. It was easy to monitor and assess child progress
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree
4. A wide variety of learning applications are available for learners with disabilities
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree

- Strongly disagree
5. Did you manage to achieve learning objectives in IEPs through online learning?
- All of them
  - Most of them
  - Some of them
  - None of them
6. The online session duration was enough to achieve the allocated learning outcomes
- Yes
  - No
7. Which of the following difficulties did you face while online learning? Tick all possible answers
- Students working independently at home
  - Keeping your students focused while conducting online learning
  - Technical issues that the student was unable to resolve independently
8. Is inclusive education successful with online learning compared with traditional classrooms?
- Yes
  - No
9. Due to COVID-19, a lot of SEN students did not take their therapy sessions, such as speech therapy or behavioral therapy: to what extent has this affected them while online learning?
- Strongly
  - Moderately



- Slightly
- No effect

10. Is the nature of online learning suitable for SEN students in your opinion?

- Yes
- No