

Investigating Science Distance Learning Instructions in COVID-19 and their impact on SEN students in American curriculum schools in the UAE

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Abstract: Although we have acknowledged technology as an important tool in education for many years, it has never been a central objective until now. Recently, the global crisis of the coronavirus pandemic has highlighted the need to use technology as a significant educational tool. The main purpose of this study is to examine the effect of using distance learning in the science subject on special educational needs (SEN students' outcomes from the teachers', students', and parents' perceptions on different cases of SEN students in some American curriculum schools in the UAE. This research study serves a relevant purpose by highlighting the significance of using various technical skills in the online teaching process, and the positive impact they have on students' learning and achievement. This study investigates various methods by which students can acquire knowledge from home and analyzes the significance and necessity of technology in the context of distance learning. This research study accommodated SEN students in the middle school level subject of science through questionnaires provided to 100 teachers and interviews with students and parents who represent their children, aiming to accomplish the needed documents that will enhance the analysis of the research questions. The results revealed that 48% of the teachers fully agreed that e-learning necessitates greater mindfulness among parents and students to maximize its benefits for students. Approximately the same percentage agreed, while the remaining teachers believed that e-learning does not require any mindfulness at all. On the other hand, the guardians accepted that distance learning is useful for their kids and that it gives diverse learning experiences in contrast with conventional educational techniques.

Keywords: technology, SEN students, e-learning, platforms, challenges, and distance learning.

INTRODUCTION

Distance learning has become increasingly popular in the digital age, with online courses and distance education programs increasing by 55% in the past five years (Akkari, 2019). Research on distance education programs focusses on instructional design, interaction methods, and its impact on student learning. Understanding the characteristics of learners is crucial for effective teaching and curriculum design (Atitumpong & Badir, 2019). Distance education can be divided into offline and online modes, with online learning being the most popular due to its ability to provide students with the same classroom interaction as in-person learning (Akande, 2019).

However, there is a high dropout rate in distance education programs. To reduce this, it is essential to identify the characteristics of learners and design curriculums that cater to their needs, as stated by Bidabadi et al. (2019). Additionally, measuring student satisfaction is crucial, as it affects their decision to

continue in the program. Teacher motivation, online interaction, course content, and other students all play a role.

This study defines distance learning as a mode of education in which students and teachers are not physically present in a classroom, but maintain contact with each other through the use of modern technology.

Background of the research

The literature on distance education has primarily focused on normal students, neglecting the needs of Special Education Needs (SEN) students. SEN students, who have learning difficulties or disabilities, require extra support from their teachers to understand concepts. The global pandemic has highlighted the need for educational institutes to tailor their special education resources to cater to these students. Teachers face a significant

challenge in dealing with SEN students, as they must focus on individual education programs, individualized lessons, and face-to-face conversations. Distance education has made access to education easier for students, but it also presents challenges for students with disabilities and special education needs. In the classroom, these students rely on their teachers to clarify their questions, but distance education programs pose challenges as they lack the same learning environment (Sung & J.N. Choi, 2019). Teachers must focus on paperwork, documentation, and creative activities for these students. They also need to connect with parents and carers for repeated learning. Teachers must adapt new resources and technology to teach these students according to their level of understanding. Class Dojo is an application that connects teachers, students, and families through videos, audio, text messages, and photos, allowing special needs students to learn from teachers in the presence of their family members. Kahoot is a game-based learning application that aids in distance education programs for special needs students (Jereb et al., 2019). It categorises enjoyable interactive activities based on level and subject, allowing teachers to recommend specific games for students with different needs. Padlet serves as a digital bulletin board for sharing information and activities, allowing students to ask questions and receive answers individually (Jashan, 2019). Flipgrid creates video discussion grids for students, allowing them to pose questions and receive answers through individual video discussions. Audiobooks are another option for special needs students, allowing them to read independently and ask questions. Word prediction software helps students write assignments in their own words, assessing their level of understanding. According to the characteristics of the students and their level of difficulty, teachers can utilize various tools. (2019). Formal and informal resources for special education support students mentally, emotionally, socially, and academically. Teachers can best utilize these resources by following specific strategies. These strategies include emotional attachment with the students, scheduling class time together, making teaching videos, regular communication with parents and guardians, collaboration with team members, and regularly conducting assessment tests. Formal resources can better help to serve the special education needs of the students (Issa et al., 2019). Research studies have shown that online learning has significantly improved academic performance, particularly for disabled students in distance education programs. However, no examination has evaluated the needs of Special Education Needs (SEN) students in separation training programs. SEN students often struggle with learning and require additional support from their educators to understand concepts. Consequently, special needs students have fallen behind in the competition of individualized instruction and online learning (Hamed, 2019). In the midst of the global

pandemic, it is crucial for educational institutions to tailor their custom curriculum resources to assist these students. The shift to distance learning programs has made it the greatest challenge for educators to manage the custom curriculum needs of students. Custom curriculum instructors must focus on individual training projects, individualized exercises, and face-to-face discussions to make all ideas clear for these students. Separation training has simplified and made access to education easier for students, but it also presents challenges for students with disabilities and special curriculum needs. They need to be more involved in paperwork and documentation for creative activities, as well as collaborating with their families and parents for similar activities. In conclusion, while online learning has provided significant benefits for students, it also presents challenges for students with disabilities and special education needs. To address these challenges, educators need to provide new resources and tools to cater to their individual learning needs.

Statement of the problem

Today, there is a significant focus on technology. For many years, people have acknowledged technology as an important tool in the field of education, but it has never been a central objective until now. Recently, the global crisis of the coronavirus pandemic has highlighted the need to use technology as a significant educational tool. It is beneficial for normal students to study online from the comfort of their homes. Nevertheless, it has become the biggest challenge for special needs students. Numerous research studies have investigated innovative strategies that can enhance the effectiveness of distance education for students. But there is a lack of literature on the importance of distance education for special needs students.

Research Questions

The study is to investigate the impact of Science Online Instructions on SEN students in American curriculum schools in the UAE. The research study aims to answer the following research questions:

1. What kind of challenges faced by teachers, schools, and SEN students from teachers' perceptions?
2. What is the SEN students' motivation to interact through this distance learning from their perception and teachers' perception?
3. What are the SEN students' perceptions regarding the new approach of online teaching?
4. What are the teachers' perceptions regarding SEN students' responses to this new distance learning approach?
5. What is the effect of e-learning on students and the educational process from the perceptions of parents and teachers?

The study's purpose

The research study aims to investigate the effects of using science distance learning on SEN students' achievement and outcomes on different cases of SEN students in some American curriculum schools in the UAE. This study examines various methods that students can utilize to acquire knowledge from home and analyzes the significance and necessity of technology in the context of distance learning.

Significance of the study

The conduct of this research study has a relevant motive, as it clarifies and creates realisation about the importance of using various technical skills in the online teaching process, and the positive impact they have on students' learning and attainment. The study delves into the challenges that teachers, schools, and special education students encounter, as perceived by the teachers themselves. The study also examines the sources of motivation for special needs students during their distance education journey, as perceived by both teachers and students themselves. After analysing the perceptions of both teachers and students, the study aimed to identify new online learning approaches specifically designed for students with special education needs. In addition to this, the study has also examined the impact of e-learning on the educational process from the perspectives of parents and teachers. The study has tried to cover five different aspects associated with distance learning and the needs of special education need students.

METHODOLOGY

The preceding section revealed that limited distance education studies are available for SEN students. They investigated the use of media and various applications as educational teaching tools, and their potential benefits.

Despite its implementation in the UAE, no studies have examined its impact on students' achievements. We conducted this study over a three-month period at a private school in Sharjah, where SEN teachers receive training to implement various activities in their science classes. The research's primary focus is on distance learning instructional features that are currently incorporated into science classes for SEN students. Students' development of scientific skills could impact their exam performance. Numerous techniques and applications have been employed to tackle the challenge of evaluating scientific skills, particularly cognitive and collaborative skills, given their strong correlation. (Lai & Viering 2012).

RESEARCH DESIGN

The present study employs a mixed-methods research approach to collect the required data that will completely answer all of the research questions. The study will employ an explanatory sequential approach, initially gathering data through quantitative methods such as teacher questionnaires, followed by qualitative methods such as interviews with students and parents. And because it is important to identify the sampling strategies and the approaches used to establish the validity of the data, purposeful sampling will be used for data collection; therefore, the selected individuals should have deeply experienced the central phenomenon that is in this research, the distance learning.

The qualitative approach involves conducting interviews with the parents of SEN students and their teachers, while the quantitative approach involves conducting a questionnaire with science teachers. The research necessitated the utilization of both instruments to gain a thorough understanding of the subject matter. Jonker & Pennink (2010) refer to this approach as a "multi-method approach," where this triangulation allows for the appropriate and simultaneous application of the study design. This approach can yield valuable insights, expand the potential for theory development, deepen comprehension of existing theoretical concepts, and yield immediate and tangible benefits. Creswell (2009) defined this design as "an approach to inquiry that combines or associates both qualitative and quantitative forms."

Therefore, in research paradigms, the idea behind using a mixed-method design is that it can effectively go beyond the limits of each individual system to get full benefits from understanding and working together to get both quantitative and qualitative benefits for bigger reasons (Johnson, Onwuegbuzie & Turner 2007). This research employs a variety of methods to collect adequate data, which is crucial for effectively addressing the research issue and accurately interpreting its entirety (Creswell 2013; Fraenkel & Wallen 2012). Moreover, Creswell (2008) suggests incorporating multiple data collection steps to comprehensively tackle the study questions. Therefore, it is useful to

Collect both quantitative and qualitative data to evaluate the attitudes of teachers and the abilities of students. The collection of data in the quantitative and qualitative cases took place through sequential strategy in order to decide whether there is some overlap or integration when the two datasets are tested and interpreted via a simultaneously interconnected technique with mixed methods (Creswell 2009). For reasons of credibility, clarification, or analysis, the "sequential triangulation approach" requires such integration (Steckler et al. 1992). However, in recent times, researchers have referred to this design as a "sequential exploratory strategy" (Creswell 2014), utilizing both

quantitative and qualitative results to evaluate various viewpoints. The sequential explanatory approach is a common mixed strategy for designing methods that also cater to researchers with strong quantitative inclinations. It is defined by the quantitative gathering and interpretation of data in the first phase of research, followed by the compilation and evaluation of the qualitative data in phase two, which builds upon the outcomes of the initial quantitative findings (Creswell 2008).

At phase number one, after teaching science online to SEN students for three months due to the COVID-19 pandemic, we collected quantitative data from the perspectives of science teachers who instruct students with special educational needs. This data was used to answer the study's first question, which was, 'What kind of challenges faced the science teachers and SEN students from teachers' perceptions?'

Teachers will also address the second question: "What is the motivation of SEN students to interact through this distance learning, as perceived by both them and the science teachers?" The final question is: How do science teachers perceive the responses of SEN students to this new distance learning approach? In phase number two, we collect qualitative data by conducting interviews with some students and their parents, aiming to address the fourth question and the third one in the study: 'How do

SEN students perceive the new online teaching approach?' Additionally, the fifth question pertains to the impact of e-learning on students and the educational process, as perceived by their parents. It's important to note that we collected the quantitative data first, and then prepared the interview questions based on the results from the initial quantitative part.

Quantitative statistics serve as the primary data that guides the analysis. The qualitative data, therefore, complements the processes as needed (Creswell 2009). We give weight to the quantitative data as a prevailing factor in addressing the anticipated results, while keeping the qualitative data separate. The process of mixing occurs when the initial quantitative findings inform the subsequent compilation of qualitative data. The two types of data are therefore independent but related to investigating the effect of science distance learning instructions on SEN students during the first period of the pandemic. The combination

Using data from various sources enables the researcher to gain insights that can contribute to an acceptable reliability assessment of the research study (Johnson & Christensen 2012).

Figure 1 illustrates the sequential explanatory design of the study.

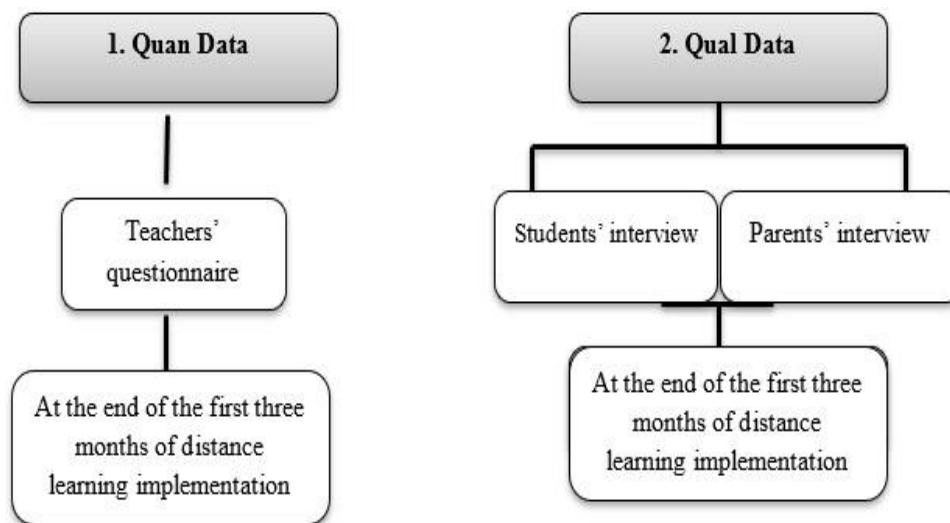


Figure 1: The sequential explanatory design of the study

DATA ANALYSIS AND RESULTS

The data analysis and results are a crucial component of any research, serving as the foundation and primary findings for the entire research paper. Understanding the

study's results is critical for drawing a meaningful conclusion. In this study, we scrutinized the survey questions posed to teachers in certain American

curriculum schools in the UAE, focusing on their experiences with online teaching and their perspectives on distance learning, particularly for students with Special

Educational Needs. The descriptive analysis and frequency analysis have been used to analyse the key findings of the questionnaire results.

Table 1: descriptive analysis of the data collected.

| | N | Mean | Std. Deviation |
|----------------------|-----|-------|----------------|
| SEN Teaching Courses | 101 | 1.594 | 0.4935 |
| D.L.A.1 | 101 | 3.188 | 1.1288 |
| D.L.A.2 | 101 | 3.653 | 0.9637 |
| D.L.A.3 | 101 | 4.594 | 0.8022 |
| D.L.A.4 | 101 | 4.089 | 0.9391 |
| D.L.A.5 | 101 | 4.376 | 0.7328 |
| D.L.A.6 | 101 | 3.713 | 1.0425 |
| D.L.A.7 | 101 | 4.327 | 0.9067 |
| D.L.A.8 | 101 | 3.594 | 1.1591 |
| D.L.A.9 | 101 | 3.901 | 0.6856 |
| D.L.A.10 | 101 | 2.871 | 1.0832 |
| D.L.A.11 | 101 | 3.069 | 0.9084 |
| D.L.A.12 | 101 | 2.96 | 0.9687 |
| D.L.A.13 | 101 | 3.584 | 1.1425 |
| D.L.A.14 | 101 | 3.416 | 1.0224 |
| C& amp; M 15 | 101 | 1.990 | 0.8185 |
| S.R 21 | 101 | 1.614 | 0.4893 |
| T.C 22 | 101 | 2.554 | 1.3818 |
| T.C23 | 101 | 2.059 | 1.0181 |

The table shows the mean and standard deviation of the collected data. The mean response for teachers who

were teaching SEN students were 1.594

Table 2: SEN Teaching courses.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid 1.0 | 41 | 40.6 | 40.6 | 40.6 |
| Valid 2.0 | 60 | 59.4 | 59.4 | 100 |
| Total | 101 | 100 | 100 | |

It was found that 40.6% of the teachers were teaching SEN courses to the students. 59.4% of the teachers were

not teaching any SEN courses at their schools.

Table 3: D.L.A.1.Save time and efforts of both teachers and students.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid 1.0 | 7 | 6.9 | 6.9 | 6.9 |
| Valid 2.0 | 24 | 23.8 | 23.8 | 30.7 |
| Valid 3.0 | 24 | 23.8 | 23.8 | 54.5 |
| Valid 4.0 | 35 | 34.7 | 34.7 | 89.1 |
| Valid 5.0 | 11 | 10.9 | 10.9 | 100.0 |
| Total | 101 | 100.0 | 100.0 | |

As per the survey results, we can see that 6.9% of teachers disagree that online teaching help in time-saving and efforts of teachers and students together. Almost 45.6% of the teachers believe that online teaching

saved time and effort for the students as well as teachers. 23.8% thinks that it is not making any difference to the current teaching process.

Table 4: D. L.A.2. Provides rich resources.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 2 | 2 | 2.0 | 2.0 |
| 2 | 11 | 10.9 | 10.9 | 12.9 |
| 3 | 25 | 24.8 | 24.8 | 37.6 |
| Valid 4 | 45 | 44.6 | 44.6 | 82.2 |
| 5 | 18 | 17.8 | 17.8 | 100.0 |
| Total | 101 | 100 | 100 | |

The table shows that only 2% disagreed that online teaching does not provide rich resources. 25% of teachers were neutral on this question and they believe that there is no effect on either side. 44.6% and 17.8%

strongly agreed that online teaching has some rich resources which help students to learn more in the academic.

Table 5: D.L.A.3. Needs well-prepared online materials.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 3 | 3.0 | 3.0 | 3.0 |
| 3 | 2 | 2.0 | 2.0 | 5.0 |
| Valid 4 | 25 | 24.8 | 24.8 | 29.7 |
| 5 | 71 | 70.3 | 70.3 | 100.0 |
| Total | 101 | 100 | 100 | 0.0 |

Online teaching requires well-prepared material for the teachers so that it can help them to teach students. 3% of teachers believe that they do not need any well-prepared online material for teaching while 95.1% of

teachers believed and strongly agreed that they do need prepared online material for teaching students. It helps them to deliver well-organized teaching experience to the students.

Table 6: D.L.A.4. Needs more training courses for implementation.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 3 | 3.0 | 3.0 | 3.0 |
| 2 | 3 | 3.0 | 3.0 | 5.9 |
| 3 | 13 | 12.9 | 12.9 | 18.8 |
| Valid 4 | 45 | 44.6 | 44.6 | 63.4 |
| 5 | 37 | 36.6 | 36.6 | 100.0 |
| Total | 101 | 100 | 100 | |

Online teaching requires more training courses for implementing it successfully. Only 6% disagreed that any more or additional training is required for implementing the online teaching. 12.9% of teachers were neutral and

44.6% of teachers agreed that there is a need for more training courses for implementation. 36.6% of teachers agreed that there is a requirement for more training courses to implement online teaching for the students.

Table 7: D.L.A.5- Needs awareness of e-learning.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 2 | 2.0 | 2.0 | 2.0 |
| 3 | 3 | 3.0 | 3.0 | 5.0 |
| Valid 4 | 49 | 48.5 | 48.5 | 53.5 |
| 5 | 47 | 46.5 | 46.5 | 100.0 |
| Total | 101 | 100.0 | 100.0 | 0 |

E-learning is not common and trendy among people. Few people or students are aware of the E-learning system and maybe they are not comfortable with the E-learning things. It might require a lot of awareness creation among parents and students. 48.5% agreed and

48.5% agreed that E-learning needs more awareness among students and parents so that it can give more benefits to students. 3% of a teacher were neutral and only 2% believed that it does not require any kind of awareness among parents or students.

Table 8: D.L.A.6- Improve your teaching skills.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 2 | 2.0 | 2.0 | 2.0 |
| 2 | 12 | 11.9 | 11.9 | 13.9 |
| 3 | 25 | 24.8 | 24.8 | 38.6 |
| Valid 4 | 36 | 35.6 | 35.6 | 74.3 |
| 5 | 26 | 25.7 | 25.7 | 100.0 |
| Total | 101 | 100 | 100 | |

The results show that 13.9% of teachers disagreed that online teaching improves their teaching skills. 24.8% of teachers were neutral about the question asked to them and 35.6% of teachers believed that online teaching

improves the teaching skill of the teachers while 25.7% agreed with the statement that online teaching improves the teaching skills.

Table 9: D.L.A.7. Different teaching strategies are required.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 4 | 4.0 | 4.0 | 4.0 |
| 2 | 1 | 1.0 | 1.0 | 5.0 |
| 3 | 3 | 3.0 | 3.0 | 7.9 |
| Valid 4 | 43 | 42.6 | 42.6 | 50.5 |
| 5 | 50 | 49.5 | 49.5 | 100.0 |
| Total | 101 | 100 | 100 | |

As per the data. We see that only 5% disagreed that online teaching requires different teaching strategies while 3% were neutral. Almost 42.6% and 49.5% of

teachers agreed that they require different teaching strategies to teach the student through online platforms.

Table 10: D.L.A.8. Reduces costs of teaching and learning.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| 1 | 8 | 7.9 | 7.9 | 7.9 |
| 2 | 9 | 8.9 | 8.9 | 16.8 |
| 3 | 21 | 20.8 | 20.8 | 37.6 |
| Valid | | | | |
| 4 | 41 | 40.6 | 40.6 | 78.2 |
| 5 | 22 | 21.8 | 21.8 | 100.0 |
| Total | 101 | 100 | 100 | |

Online teaching is somewhat cost-effective and it requires less infrastructure as compared to the traditional teaching methods. As per the survey, we see that 7.9% disagreed that online teaching reduces the cost of teaching & learning while 8.9% disagreed with the

statement. As per them, it increases the cost of teaching and learning. On the other hand, 62.4% of teachers believe online teaching help in reducing the cost of teaching & learning overall.

Table 11: D.L.A.9. Implementation should be gradual.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| 1 | 0 | 0.0 | 0.0 | 0.0 |
| 2 | 2 | 2.0 | 2.0 | 2.0 |
| 3 | 23 | 22.8 | 22.8 | 24.8 |
| Valid | | | | |
| 4 | 59 | 58.4 | 58.4 | 83.2 |
| 5 | 17 | 16.8 | 16.8 | 100.0 |
| Total | 101 | 100 | 100 | |

As per data, 2% of teachers believe that the implementation of online teaching should not be gradual while 22.8% of teachers were neutral. 58.4% of teachers

believed and agreed that implementation should be gradual. 16.8% of teachers agreed with the statement that implementation should be gradual.

Table 12: D.L.A.10. Easy to monitor teaching and learning process.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| 1 | 4 | 4.0 | 4.0 | 4.0 |
| 2 | 44 | 43.6 | 43.6 | 47.5 |
| 3 | 24 | 23.8 | 23.8 | 71.3 |
| Valid | | | | |
| 4 | 19 | 18.8 | 18.8 | 90.1 |
| 5 | 10 | 9.9 | 9.9 | 100.0 |
| Total | 101 | 100 | 100 | |

Almost 43.6% disagreed that online teaching will not be easy to monitor the teaching and learning process. According to them, it is difficult to monitor online teaching. 23% of a teacher were neutral and did not give any opinion about the question. 18.8% of teachers agreed

that online teaching would be easier to monitor the teaching and learning process of students. Only 9.9% of teachers strongly agreed that it would be easy to monitor the learning and teaching of students.

Table 13: D.L.A.14. Distance learning is a successful experience.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 6 | 5.9 | 5.9 | 5.9 |
| 2 | 9 | 8.9 | 8.9 | 14.9 |
| 3 | 36 | 35.6 | 35.6 | 50.5 |
| Valid 4 | 37 | 36.6 | 36.6 | 87.1 |
| 5 | 13 | 12.9 | 12.9 | 100.0 |
| Total | 101 | 100 | 100 | |

As per the survey data, we found that almost 5.9% disagreed and 8.9% of teachers disagreed with the statement that distance learning is a successful experience while 45.6 were neutral about the opinion. Almost 36.6% of teachers believed that distance learning

is a successful experience while 12.9% of teachers agreed with the statement that distance learning is a successful experience. This shows that almost 49% of teachers believe it is a successful experience.

Table 14: Challenges and Motivations 15

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 34 | 33.7 | 33.7 | 33.7 |
| 2 | 34 | 33.7 | 33.7 | 67.3 |
| Valid 3 | 33 | 32.7 | 32.7 | 100.0 |
| Total | 101 | 100.0 | 100.0 | |

The results are equally divided among the participants. 33.7% of teachers believe that learner's issues is a challenge which is related to the online learning while other 33.7% believe that instructor issue like the transition from face-to-face to online, managing

time, and finding appropriate teaching styles is another challenge to the online teaching. Rest 32.7% of teachers believe that Content issues are a challenge to online teaching.

Table 15: S.R.19. I can understand what type of learner my student is in an online course.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 82 | 82.0 | 82.0 | 82.0 |
| Valid 2 | 18 | 18.0 | 18.0 | 100.0 |
| Total | 100 | 100.0 | 100.0 | |

The results show that 82% of teachers understand the types of the learning style of students in online courses

while the other 18% of teachers are not able to identify the style of their students.

Table 16: S.R.20. How do you get the students' feedback?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| Valid 1 | 14 | 13.9 | 13.9 | 13.9 |
| 2 | 10 | 10.0 | 10.0 | 23.9 |
| 3 | 45 | 45.0 | 45.0 | 68.9 |
| 4 | 24 | 24.0 | 24.0 | 92.9 |
| 5 | 8 | 8.0 | 8.0 | 100.9 |
| Total | 101 | 100 | 100 | |

The teacher provides feedback to their students in online courses and 13.9 of teachers use polls to give feedback while 10% of teacher uses surveys to provide feedback. 45% of teachers uses classroom participation

to provide feedback while 24% of teachers uses a quiz to give feedback. Only 8% uses other methods to provide feedback to students.

Table 17: S.R 21. Are students with emotional and behavioural disorders do as well socially in online environments?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| Valid 1 | 39 | 38.6 | 38.6 | 38.6 |
| 2 | 62 | 61.4 | 61.4 | 100.0 |
| Total | 101 | 100.0 | | |

As per results, 38.6% of teachers believe that emotional and behavioral disorders do well socially in an online environment as compare to the classroom

environment. 61.4% believed that students with emotional and behavioral disorders are not changed based on a change in a teaching environment.

Table 18: T.C 22. Attitude to internet use.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| Valid 1 | 40 | 39.6 | 39.6 | 39.6 |
| 2 | 4 | 4.0 | 4.0 | 43.6 |
| 3 | 22 | 22.0 | 22.0 | 65.6 |
| 4 | 31 | 31.0 | 31.0 | 96.6 |
| 5 | 4 | 4.0 | 4.0 | 100.6 |
| Total | 101 | 100 | 100 | |

We have also asked a question to the teacher about their attitude to using the internet. 39.6% believe that using the internet for learning is a very good idea while only 4% believe that it is a bad idea. 22% of people

pinioned that it would be desirable to use the internet for learning.31% of a teacher like the idea ofusing the internet for learning and 4% dislike the idea of using the internet.

Table 19: T.C 23. Behavioural intention.

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|---------|---------------|--------------------|
| 1 | 35 | 34.7 | 34.7 | 34.7 |
| 2 | 39 | 38.6 | 38.6 | 73.3 |
| Valid 3 | 13 | 12.9 | 12.9 | 86.1 |
| 4 | 14 | 13.9 | 13.9 | 100.0 |
| Total | 101 | 100 | 100 | |

A question was asked about the intention of using the internet to the teachers. 34.7% of a teacher said that the intent to use internet whenever it is possible for them while 38.6% of teacher intent to use the internet in future learning. 12.9% will instantly adopt the internet for learning while 13.9% will adopt the internet in the future for learning.

INTERVIEWS

A six-question interview was conducted with parents and students about online teaching courses. Parents found online teaching experiences beneficial for their children, offering a unique learning experience compared to traditional methods. Online classes provide students with exposure to teaching and technology, allowing them to answer questions or quizzes. Students also enjoyed online teaching courses and the process of studying at home. However, all parents believe that online teaching is only effective if there is an interactive session; otherwise, it doesn't add much value to the students' learning process. Overall, online teaching is a valuable experience for both parents and students. Parents believe that the school physical environment is better for their child than distance learning due to its unique learning environment, which allows children to interact, play, share ideas, and grow through group learning. However, using the internet for online learning can be challenging for SEN students who may have disabilities or difficulties in the learning process. Parents believe that online teaching has improved their child's skills by providing them with knowledge about technology, teaching methods, and mobile learning devices. Distance learning has added skills such as internet use, smart device usage, understanding of how to operate, increasing confidence, and speaking ability with class. It may also make them shy or avoid activities. Online teaching is effective for SEN students in USE schools, as it provides more convenient and interactive learning opportunities. Parents appreciate the new teaching method, particularly for extracurricular activities.

Only in a school setting is this possible. However, as technology evolves, we should provide SEN students with more interactive sessions through online teachings.

Initially, SEN students initially struggled to adapt to online teaching, but they found the video learning, listening to class sessions, and interaction with other students and teachers fascinating and motivating. Most parents reported that the majority of children liked online sessions because they were more convenient and could interact with people without hesitation due to their disability issues. Online teaching has become increasingly popular among SEN students due to its convenience and time-saving benefits. A survey revealed that 45.6% of teachers believe online teaching saves time and effort for both students and teachers, making their lives easier. Additionally, 36.6% of teachers believe online teaching provides a better learning experience for SEN students. This trend highlights the importance of mobile devices and new applications in online teaching.

In conclusion, parents believe that the school physical environment is better for their child than distance learning because of its unique learning environment and the benefits it offers.

DISCUSSION

SEN students are students with learning difficulties or disabilities who struggle to learn like other students and require additional support from their teachers. The shift to distance education and online learning often overlooks these students. The pandemic has made it crucial for educational organisations to tailor their specialised curriculum resources to support these students. The introduction of new remote learning programs during this time has raised the expectation for students to absorb information, making it the most challenging task for teachers to manage custom curriculum needs for these students.

To cater to students' unique needs, specialized curriculum instructors should focus on individual schooling projects involving individualized exercises and personal discussions. Distance training has made schooling more accessible, but it has also tested students with disabilities and those with special curriculum needs. These students often rely on educators to help them understand their questions, but distance education programs may not provide the same learning environment

as in-person learning. A survey revealed that only 40.6% of UAE teachers are teaching Special Education Needs (SEN) students, suggesting that the best teachers are not participating or their schools may not have the facilities to provide education to SEN students. Online teaching has both advantages and disadvantages.

According to the study, online teaching saves over 45% of teachers' time and effort in teaching special education students (SEN) because it eliminates the need for classroom sessions, papers, and other school resources. facilities. However, 30.7% of teachers believe that online teaching will increase the time and effort required to teach SEN students, while 44.6% and 17.8% strongly agree that online teaching provides rich resources that help students learn more academically.

Online teaching requires large and well-prepared materials, and pre-planning is crucial for effective sessions. Nearly 95% of teachers believe that they need well-prepared teaching material to conduct online sessions for SEN students. However, implementing online teaching is not simple and requires a significant number of resources. 12.9% of teachers expressed neutrality, while 44.6% concurred that additional training courses are necessary.

Online learning is not common among schools and parents, and it requires awareness and explanation of the benefits of online sessions. Teachers must focus on paperwork and documentation for creative activities, and students need to connect with their parents and caregivers for the same activities. Teachers need to adopt new resources and technology to teach special needs students according to their understanding level. Some specific resources can help special needs students in the classroom.

Special needs students require special attention from teachers, who must focus on administrative work and documentation for innovative exercises. They also need to engage with their families and parents in similar exercises to reinforce their learning. However, distance training requires new resources and innovation to cater to these students' levels of understanding. Some specific tools can help special needs students in the classroom. E-learning is not widely known and may require more mindfulness among parents and students. 48.5% of teachers agreed that e-learning needs more attention from parents and students in order to provide more benefits. 3% of teachers were neutral, and only 2% agreed that it doesn't require mindfulness.

Guardians believe that online-based teaching is beneficial for their children and offers diverse learning experiences compared to traditional methods. Online classes allow students to respond to quizzes or tests, making them more engaged in the learning process. However, they also acknowledge that online teaching can be an acceptable experience if it is accompanied by a learning process that enhances students' learning.

CONCLUSION

The study highlights the benefits of online teaching or distance learning for teachers and SEN students in UAE schools. The study demonstrates that teachers can save time and effort through distance learning, and teaching SEN students requires less infrastructure. Teachers need well-prepared teaching materials to provide a positive teaching experience. Parents of SEN students also agree that online teaching experiences are beneficial for their children, as they provide a different learning experience compared to traditional methods. Online teaching exposes students to both teaching and technology, making it beneficial for SEN students. The study recommends more online teaching or distance learning programs for UAE schools, creating a different learning environment and encouraging self-learning habits among students. This would create a more conducive learning environment for both SEN and other students.

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