Special Educators' Experiences During COVID-19: How Special Educators Navigated the Changes in Education (From Spring 2020 to Fall 2020)

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1. INTRODUCTION

Since the coronavirus (COVID-19) pandemic began, public health measures have caused schools to shut down, and education has moved online around the United States (Shapiro and Harris 2020; Masonbrink and Hurley 2020). Many people have had to switch from brick-and-mortar (in-person classroom) learning to e-learning (learning conducted electronically) for the first time, familiarizing themselves with new technologies and modes of communication. As a result, e-learning has become the dominant mode of providing education during the COVID-19 pandemic, with school closures keeping ninety percent of all students out of school, thus reversing years of educational progress (United Nations Sustainable Development 2020). In the United States, "nationwide closures of elementary and secondary schools due to the novel coronavirus (COVID-19) have severed nearly 60 million students from critical educational and health resources" (Masonbrink and Hurley 2020). To better understand how teachers navigated these changes, we looked at the experiences of special educators from Hillsborough County, Florida who instruct students with disabilities at the K-12 level.

The United Nations Sustainable Development Goals recognizes that equal access to quality education is key to a prosperous society, such that it creates opportunities for socioeconomic mobility and reduces poverty and inequalities (United Nations Sustainable Development 2020). In addition, the United Nations Convention on the Rights of Persons with Disabilities defines disability as a "fundamental human rights

issue" and has proclaimed that "meeting the development goals of persons with disabilities is necessary to meeting overall global development goals" (Hayes and Bulat 2017). As supported by the United Nations, as well as other legal protections such as the Individuals with Disabilities Education Act of 2004 (Burdette et al 2013), the needs of students with disabilities must be recognized and addressed to ensure quality education for all.

When it comes to receiving a quality education, students with disabilities are at a disadvantage (Shaheen and Watulak 2019). These inequalities may be exacerbated when formal education undergoes further changes. Students with disabilities may begin to see academic setbacks, new stresses and behavioral issues, and the implementation of new teaching and learning strategies. This has been the case during the COVID-19 pandemic: researchers have begun to document how students with disabilities are not receiving the support they need in e-learning during the transition (Masonbrink and Hurley 2020; Tremmel 2020; Schuck 2020). Without the help of traditional means from brick-and-mortar schooling, they are now lacking access to nutrition, health care, mental health support, behavioral health care therapies, and educational material. Moving forward, it is important to research how teachers have navigated the changes in education because their decisions and strategies will heavily impact students' ability to continue to earn a quality education.

First, we review the literature on special education during humanitarian crises, including changes to the delivery, experience, and quality of education. Accordingly, we look at the differences between e-learning and brick-and-mortar, the problems related to e-learning in special education, the experiences of K-12 special educators in e-learning,

and the changes in special education during natural disasters and outbreaks. Then, we describe the methodology for this study, followed by the challenges, limitations, and ethical considerations. Next, we present the main themes found in the interview data and compare each case. Finally, we conclude with a discussion of the findings, how they relate to the SDG of quality education, and the practical implications of our research.

2. BACKGROUND AND LITERATURE REVIEW

2.1. Brick-and-Mortar vs. E-Learning (in Special Education)

Examining the differences between in-person and online education provides insights into the function of each classroom type. Previous research suggests that students with disabilities may learn better in e-learning as opposed to brick-and-mortar. In a comparative study of college-level students with disabilities, Stewart II et al. (2010) showed that students in traditional courses were less likely to withdraw from classes when compared to e-learning. More recent studies have also looked at the changes that occur during an online transition. Ramanujam (2020) has found that children require more physical, emotional, and mental support in e-learning while clinicians require more preparation to satisfy these needs. Similarly, Masonbrink and Hurley (2020) discovered that students with disabilities from low-income families do not receive the same resources in e-learning that were available in brick-and-mortar, such as face-to-face education, nutrition, and health care, and they face new challenges in e-learning, such as lack of technology and internet access. To illustrate, Shuck (2020) describes the different stages of e-learning: (1) identifying the technology needs of students/family, (2) providing the necessary technology as well as additional support for online services, (3)

physically delivering the technology to students/families, and (4) preparing students' schedule for e-learning. Evidently, some families have the ability to meet these expectations, while others do not, which makes technology access even harder to attain. Research shows that certain aspects of in-person learning are lost in the online classroom, while others are gained.

2.2. Problems Related to E-Learning (in Special Education)

Although disability laws and policies are put in place to ensure a quality education, barriers still remain. Mandates like the Americans with Disabilities Act (ADA), the Rehabilitation Act of 1973, and the Individuals with Disabilities Education Act (IDEA) are meant to provide equal access to programs, services, and accommodations to Americans with disabilities, but technology accessibility continues to be an issue in special education (Shaheen and Watulak 2019; Rice 2015; Burdette et al. 2013). One critique has been that school administrations have a hard time addressing technology needs because the division of school departments limits contact with other branches, teachers, and students. For example, the division of district technology and the special education department makes it difficult to communicate and collaborate on technology access plans for students with disabilities (Rice 2015: 32-33). Another critique has been that bureaucracy and adherence to protocol prevent school faculty from implementing change at the structural level. For example, educators have to rely on preexisting frameworks of disability laws to deal with new issues concerning their students in e-learning (Rice 2015: 32). Rather than addressing the emerging needs of students with disabilities, school faculty is confined to specialized tasks and roles that can add barriers to quality education.

2.3. Experiences of K-12 Special Educators in E-Learning

Special educators are starting to undertake new roles and responsibilities within the virtual environment, which may have different functions, goals, and expectations to that of face-to-face learning. However, these considerations have gone unnoticed and, at times, completely ignored. In a study about online learning practices, 80% of teachers who taught e-learning had not considered the needs of students with disabilities while developing their courses, even though students with disabilities had expressed concern over their academic performance (Burgstahler 2015). Another study acknowledges that special education teachers lack collaboration in the professional community, calling for increased dialogue and presence between educators and learners as well as among educators to promote a "community of inquiry" (Dunn 2019). Lastly, a study by Tremmel (2020) shows that teachers may encounter issues with individualized education programs (IEPs) after transitioning online. While studying the challenges, difficulties, and lessons of the online transition, Tremmel explains how teachers in a rural area were unable to complete IEPs because IEP meetings were conducted virtually and not in person and, thus, teachers could not collect sufficient data and find students eligible for services.

In an attempt to better understand the perspectives and concerns of K-12 special educators about e-learning, Burdette et al. (2013) conducted a survey about the costs and benefits of online learning. According to 45 state and non-state jurisdiction directors of special education, (1) online learning provides a cheaper alternative to direct instruction; (2) online learning is more flexible than traditional scheduling and instructional methods; (3) online learning increases access to qualified teachers for

students in remote areas; and (4) online learning lacks proper services, accommodations, and monitoring. Nonetheless, special educators' willingness to learn and improve shows promise. Survey data indicates that teachers are interested in adjusting their e-learning methods and giving students with disabilities the best chance of success, irrespective of their previous exposure to training programs (Smith 2016).

2.4. Changes in Special Education During Natural Disasters and Outbreaks

Social scientists have previously documented how major disruptions (natural disasters or disease outbreaks) affect education in their corresponding locales (Picou and Marshall 2007; Ducy and Stough 2011; Pietro 2017). Today, as schools have transitioned online due to public health and safety regulations, the COVID-19 pandemic is no different. Many issues have surfaced throughout the online transition that have echoed the processes of other disruptions, particularly with the closure of schools. However, COVID-19 presents new challenges to special education as schools transitioned from brick-and-mortar to e-learning.

Current and past research on outbreaks and natural disasters, such as pandemics and hurricanes, highlights the challenges of K-12 students as they experience disruptions in schooling. The group of students who are finding themselves to be more vulnerable are those with significant disabilities by accounts of educators, counselors, and research. Ducy and Stough (2011) explain how students with significant disabilities were relocated during Hurricane Ike and how this disruption affected their education. Findings reveal that the relocation of students and educators to new settings caused a great disturbance to quality education because they lost specialized equipment, familiarized settings, and daily routines.

The online transition caused by COVID-19 has led to many issues in special education, including internet connection issues, audio issues, and downloading issues. Research provided by Masonbrink and Hurley (2020) also demonstrates that children with disabilities lack the ideal support for e-learning, such as internet services and technology access. Moreover, depending on the type and severity of the disability, students with disabilities face different challenges, and research shows that disruptions to education resulting from natural disasters impact their routines, services, and learning. This means that students with disabilities are not receiving the resources they need to succeed, such as speech therapy, occupational therapy, applied behavior analysis (ABA), healthcare, and IEP services. That said, Dhawan (2020) explains that online education during the pandemic may not be classified as quality education, but it allows for the continuation of education in a time where it would have otherwise ceased to exist.

Throughout our research, we found that information about the effects of COVID-19 and similar natural disasters on special education exists but is limited. The goal of the current study is to illustrate the experiences of special educators in Hillsborough County during COVID-19. Teachers are instrumental to the delivery of education so understanding their role in the classroom is key to ensuring accessible education for students with disabilities. Additionally, detailing the actions of teachers will supplement the existing literature, and create new opportunities for research which may ultimately lead to education reforms.

3. METHODS

3.1. Design

In this research, we conducted an illustrative case study to better understand the experiences of special educators during COVID-19. Emerging from several lines of research (Eckstein 1975; George and Bennett 2005; Mitchell 2006), an illustrative case study is defined as preliminary research that aims to describe social phenomena that is not widely acknowledged in the sciences, if at all. Its unit of analysis can be situated anywhere from space, place, and time to processes, structures, and institutions (Swanborn 2018:19-20). This means that an illustrative case study may look at relationships between social actors, experiences and responses to events, beliefs about the social world, new/old/unexpected behaviors, and sources of social control that influence societies (Edwards 2011:110). The goal, then, is not to contribute to theory (Thomas 2011: 515-16) but to illustrate real-life scenarios (Thomas and Myers 2017:2). By focusing on these unique events, we can record the world as it is experienced by those within it or get closer to a social reality that is shared among groups of people.

In contrast to social scientific research, which tends to look at problems from one direction, illustrative case studies offer multiple dimensions to single events while also preserving the possibility of finding connections in the bunch. In fact, *singleness* and *variability* are two central characteristics of a case study (Thomas & Myers 2017:4). The *singleness* of a case refers to the situational characteristics of a social phenomenon that cannot be replicated—the specific context under which an event is taking place as well as the event itself—, while the *variability* refers to the multiple angles and realities that may come from said phenomenon. In other words, an illustrative case study has the advantage of documenting single events and providing multiple realities, which paints a colorful and richer picture of social phenomena.

The case we studied is that of K-12 special educators, located in Hillsborough County, FL, who experienced changes in education due to the COVID-19 pandemic. This particular period dated from the Spring 2020 semester (end of the school year) through the Fall 2020 semester (beginning of the new school year). This period covers the beginning of the pandemic, where schools were closed and special educators were forced to online teaching as well as the beginning of the new school year where schools reopened with limited occupancy and limited the students attending brick-and-mortar. This period in time is important due to the minimal change that happened between the Spring and Fall semesters in regard to online capabilities for special educators. We are interested in this historical time because the COVID-19 pandemic led to unprecedented changes in education, particularly in the classroom, and little is known about the experiences of special educators. An illustrative case study allows us to shed light on the experiences of special educators and how they responded to changes in education. Not only that but a series of in-depth interviews yields enough singleness and variability to create a holistic picture of what is at hand.

3.2. Sample

In doing background research, we discovered that case studies usually focus on fewer participants for robust descriptions of the social world (Longhofer et al. 2017). Our goal was to interview six educators to increase the likelihood of themes emerging across the data and strengthen research findings. We believed that a greater number of participants was likely to highlight common patterns and themes in the data as well as outline differences that may exist, which served the purpose of an illustrative case study (to study social phenomena and reveal their facets).

The sampling procedures for this study included a mixture of theoretical and snowball sampling. Theoretical sampling allowed us to locate participants for our interviews by utilizing our prior understanding of the target population. Then, with the help of one or two participants, we identified more individuals who fit our criteria through snowball sampling. This method facilitated the recruitment process as we had close connections to school faculty in special education. Combining theoretical and snowball sampling led us to specific and limited cases which helped reveal important features of the subject under study (Loseke 2017:121-122).

Both sampling procedures worked best with our research. Theoretical sampling allowed us to use our current knowledge on the topic to obtain a sample (Loseke 2017:121-122) while, snowball sampling allowed us to find additional members in the target population. However, these procedures had limitations. For example, snowball sampling is a non-probability sampling method, which means that bias is likely to occur given our level of control over the selection process and the narrow social circles which were studied, and findings may not be generalizable to the experiences of special educators in different schools, districts, cities, and/or states. In other words, snowball sampling may have left us with a sample of people that expressed bias due to our initial contacts and yielded results that are not representative of special educators as a whole. That said, our goal in this research is to illuminate the experiences of special educators within Hillsborough County.

3.3. Data Collection and Analysis

As opposed to structured interviews which pose a set of fixed questions, in-depth interviews rely on open-ended, semi-structured questions about informants'

background, attitudes, and actions (253). During in-depth interviews, researchers must actively listen to explanations, ask follow-up questions, and capture broad or abstract concepts. This is unlike structured interviews which measure a predetermined and restrictive set of variables. In our research, we conducted in-depth interviews as it not only gave participants the freedom to share the extent of their experiences while remaining on topic, but it also gave researchers the ability to explore unstudied processes. Given that we focused on a previously unstudied phenomenon, namely the online transition of COVID-19, we collected data about the unstudied experiences of special educators through in-depth interviews (Chambliss & Schutt 2019:233).

After coordinating with participants, we held interviews over the phone or using online applications that allow for voice calls. We created a series of organized questions related to our previous research analysis. To avoid the detection of personal information, we managed respondent information according to ethical standards in the social sciences. We protected the identity and privacy of students and teachers by using pseudonyms and generic labels; we protected the confidentiality of participants by keeping all information between group members (the researchers) only; and we intend on deleting all data once our assignment is graded. The interviews were recorded and later transcribed for further qualitative analysis.

To analyze the data, we used an approach derived from content analysis, called constant comparative analysis (Glaser 1965; Glaser & Strauss 1967). This strategy involves (1) the use of coding, which is an inductive category development process that produces basic, general, and broad categories based on the data, and (2) the comparative analysis of individual responses and categories, which looks for similarities

and differences in the data. Thus, we transcribed interviews at full length, followed a 3-step coding process, and compared/contrasted major categories in search of greater themes. By analyzing each case, we can began to carefully trace themes, identifiers of thoughts and feelings, and processes as they pertained to special educators (Loseke 2017).

3.4. Challenges and Limitations

One limitation to this study is that inductive research does not have the ability to measure or discover every element that may be playing a role in the issue we are investigating (Loseke 2017); it would not be possible to ensure that we identify every factor that influences the changes in education. Thus, we were limited to understanding the changes in education during COVID-19 through the perspective of teachers. Additionally, the data and results presented here were gathered from the experiences of educators living in Hillsborough County, meaning they may not be generalizable to the experiences of special educators and students in other areas of the United States or other countries around the world. Another limitation was that the time investment required for conducting and analyzing in-depth interviews from an illustrative case study placed a limit on the number of participants we could include. As a result, a limited number of participants may have led to a limited number of perspectives and experiences. It is possible that we lost valuable information about the subject under study if some experiences were more unique than others, therefore missing a case. A final limitation was that the self-reporting nature of our study may have led to biased or inaccurate results, simply because people's claims about their attitudes and behaviors do not always reflect reality or how they truly think, act, or behave. Despite these

drawbacks, in-depth interviews were selected due to their ability to allow participants to provide elaborate descriptions of their experiences and feelings.

3.5. Ethical Considerations

The well-being of the participants in this study was of the utmost concern, and because of this, our primary ethical consideration was maintaining the anonymity of all participants and related individuals. Throughout the duration of this study, it was of great importance to ensure that no teacher, student, or school identities were revealed. Participants' personally identifiable information was protected as we conducted interviews, recorded data, and reported results. We used pseudonyms or other labels to identify all of our participants throughout our report, including when students were mentioned in narratives. However, we chose to utilize a reference page linking our participants to their assigned identifying title until the data collection was completed. This ensured that all data stayed organized and attached to the correct person and related experiences. Once our analysis was completed, this identity attachment information was eliminated. Upon grading of the final assignment, all data will be deleted. A final ethical consideration was the confidentiality of student information. We ensured that this type of information was not disclosed but, if it was disclosed by any educator in an interview, it was omitted from the interview report. Throughout the study, we protected the privacy of all involved by keeping collected information private and within the group of researchers only.

4. FINDINGS

After completing the analysis of the interviews with our special educator participants, we were able to determine five major themes that existed among all five participants. The themes that we identified were as follows, teacher training and administrative support, pedagogy changes, changes to IEP use, student and teacher challenges, and experienced benefits of e-learning.

4.1. Teacher Training and Administrative Support

Educators displaced due to the COVID-19 pandemic were reliant on support from schools and school districts for organization and implementation of new practices. The transition from brick-and-mortar to e-learning dramatically changed the tools and necessary pedagogical approaches which would best meet quality education standards. The abrupt onset of the pandemic and switch to e-learning practices, however, left many teachers without a sense of security or preparedness for this transition, as was consistently documented in each interview.

The response to the transition to e-learning varied between school districts. In some districts, there was an incredibly strict protocol, including curriculum and specific academic resources for reference, which was then communicated to teachers through administration, as was articulated by one interviewee.

> What the different components that our school board was offering. All of that was pumped out to us and our administrators literally printed it and had a binder. And anytime we'd have a question, they'd be like, "Well, page 23 says…" So that was what our administration...We have a fairly new administration, so they were very much by that opening plan as our new superintendent referred to it.

Other schools left most of the decision making in approach up to the teachers still. Instead of implementing strict practices, the district and school offered resources and technical support for the teachers to decide what was most fitting.

> The school has bought some different computer programs and the district has also bought some different programs that are able to aid with e-learning. As far as really implementing IEP goals, that really comes from the teacher, not necessarily the school's procedures.

Other interviewees very pointedly noted that their schools were not involved in the implementation of new practices, as that responsibility was placed solely on the teacher. However, every interviewee said that broad moral support, flexible schedules, and an understanding and willingness to adjust to unforeseen circumstances including illness and technical difficulty were integral in maintaining continuity in their classrooms.

> I think my admin has done a really good job of giving us not just moral support... They've really been there to answer questions. Our administration will be up until 10, 11 o'clock at night answering questions that we have.

One interviewee highlighted the implementation of aides from the school and district to meet the needs of teachers specifically as uniquely helpful.

> Communication from the superintendent, we've received communication from our principal saying, Hey, if you're having struggles in Canvas, we have three people on campus who are super good with Canvas that have already said they don't mind if you ask them questions or need assistance with anything.

In conjunction with implementing new online resources including educational games and sites which tracked reading comprehension, as well as receiving support from administration, the teachers also reported the use of physical materials which were distributed to the students for more thorough engagement. These materials were prepared by the teachers.

> So, there's similar materials that they would be using in the classroom. And then that way they have concrete materials while we are doing our virtual lessons. And then they also have manipulatives and tools that we use within the classroom, with them at home.

Specifically, when questioned about training opportunities for the teachers, and whether that training translated into preparedness for the transition to e-learning, every respondent said they were not adequately trained or prepared for the virtual classroom environment. Most examples of training experiences centered around the implementation of new online resources for organizing the classroom environment.

Programs such as Zoom and Canvas were utilized across the board, however most

respondents suggested that these programs alone were not sufficient for creating a

quality education and sought third party programs to implement as well. One criticism of

the training process was that most help was offered on a voluntary and individual basis,

which was not conducive to an already rigidly structured schedule which was necessary

for the transition.

> They did offer a lot of things. Do I think that they were super feasible? Not really, because, again, we have so much on our plate already that to do trainings on the one or two days that we have off is just kinda tiring.

4.2. Pedagogy Changes

Pedagogy, which includes teaching resources, styles, practices, and support,

varied among special educators during COVID-19. Based on the interview data,

educators utilized a number of digital applications while transitioning online. They

reported using Zoom, YouTube, BrainPOP, FaceTime, Canvas, and Office365 for e-

learning. Educators also received help from external sources from which they drew

inspiration for e-learning. When adjusting their lessons to e-learning, educators

borrowed ideas from online resources, such as Facebook teacher groups, and

collaborated with educators in different school districts. Doing so helped them find

useful methods to apply in the virtual classroom.

> ...Luckily, teachers are pretty creative when it comes to taking ideas from other people. So, I honestly found more ideas and resources from online teacher groups, like Facebook teacher groups and other teachers that are e-learning and collaborating with teachers I know that teach special ed in other school districts, when this happened in the spring, cause everyone was just kind of, "We don't know what to do."

During COVID-19, special educators employed different teaching styles according to the

specific needs, differences, and preferences of students with disabilities. For example,

educators used imagery, visual communication methods such as schedules, social

stories, color-coding systems, and personalized cartoon avatars known as Bitmojis for

visual learners. They used a mixture of virtual and physical activities such as combining

virtual lessons with paper activities or combining tactical and kinesthetic learning for

those who struggled with e-learning. They incorporated treats into brick-and-mortar for

gustatory (taste) learners and introduced educational games (such as Boom cards

which target specific sounds, grammar concepts, following directions, and answering

questions) for e-learners.

> So just last week for the last week of Halloween, all of our activities we were doing, what was it? One's and ten's trying to reinforce that with the student. And we're like, "Okay, so for every ten's you're going to use the candy corn and for every one's, you're going to use a sweet tart." So, we would literally have them, put them next to each other cause not only were they textually different, it was something different than his normal manipulatives he can have. We also know he would have fun doing it. And then, two, he also got a treat at the end of it...

In the event that these approaches did not meet students' needs, educators also offered

alternatives. First, they identified the issue with the teaching style and then readjusted

and reworked the lesson for the following day.

> I think it would have just been dependent upon the student. I mean, as you know, in the classroom we use certain things that are considered online learning and some of the students that use those can handle that. But as- I think it really would just depend on the student and what type of platform...

Special educators used many practices to capture the attention of students with

disabilities and encourage their participation in e-learning. Overall, educators made

lessons more creative and fun by including more sensory information in lessons, such

as lights, colors, sounds, animations, videos, games, drama, and energy. For example,

one educator used Jack Hartman videos to make students sing and dance online.

Another educator exaggerated their emotion through hand gestures and their vocal

delivery. In addition, special educators used other practices to engage students with

disabilities. Some educators used a fill-in-the-blank activity, in which they omitted

sentences from an educational presentation as an incentive for students to focus on the

class material. They reduced the duration of e-learning lessons, minimized distractions over Zoom lessons by muting students who stemmed or broke down, replicated the 8-hour schedule of brick-and-mortar within the virtual environment, and encouraged students to push themselves despite obstacles or difficulties.

> Um, I tried to keep things like fun in like more like play-based in a sense. So especially with my ones who were like, I'm at home, I'm not at school. I don't want to be doing anything. So, I was just trying to keep things like more like, game-wise like, just keep it educational, but they're playing. So, they're not exactly thinking that they're in school, but they are learning something.

The changes in education that took place during COVID-19, namely the online transition in the Spring 2020 and blended learning in Summer 2020, required flexibility from special educators. Educators had to provide a clear and detailed description of their lessons so that students and parents could access this information in a user-friendly way. They also had to recreate all in-class material for the virtual environment, maintain constant and direct communication with parents about student performance as well as give immediate feedback about it, and in hybrid classes during Spring 2020, they had to create a one-size-fits-all lesson for students from different academic levels and with different medical needs.

> ...normally, there's two teachers in the classroom and I could be doing one thing with one set of students who are on one level and then the other teacher could be with another set of students who are on a different level of learning. And now we don't, we don't always have the ability to do that. Now it's like we're having to teach the lesson and then adapting to where we have all students on multiple different levels and just getting them through the lesson as one big class...

Later on, in Summer 2020, they had to divide students into group or individual lessons (rotations) for e-learning in order to tackle a skill, detail, or spelling pattern while also allowing students to solve problems on their own in brick-and-mortar, which afforded them more independence with learning.

Finally, special educators found themselves offering support to students with disabilities to facilitate their learning experience. For instance, educators were available

to students 24/7 and openly shared school numbers, personal numbers, email

addresses, and text messages with them. Furthermore, given the circumstances of

students and their parents, educators extended the deadlines for assignments, giving

plenty of time to complete assignments, and they set schedules or breaks in between

lessons for those who needed it. In terms of learning, educators made the Canvas

platform as user-friendly as possible, provided handheld items, such as blocks, to tactile

learners, and gifted care packages to students which included whiteboards and white

erase markers used for doing CVC (consonant, vowel, consonant) words and calendar

math pages.

> ...We are also, both myself and my co-teacher, available to the student 24/7. They have our school numbers, they also have our personal numbers, they have access to email us, text messaging... So, whatever we can think of to give to this one particular student, we we've pretty much opened the doors to them.

4.3. Changes to IEP Use

Individual Education Plan (IEP) falls under the Individuals with Disabilities

Education Act (IDEA). An IEP is designed to serve grade levels preschool to 12th grade.

A child who is receiving special education, occupational therapy, physical therapy,

speech therapy, and any other form of specialized assistances at a school must have an

IEP. An IEP is designed for a student individually based on their needs and

qualifications. The goal of an IEP is for parents, teachers, school administration, and

therapists, to work together and create a plan that will assist the student in improving

their education and development based on their special needs. The IEP is an

established set of goals for the student, and during the school year data needs to be

collected to be able to measure and report progress or regression in a quarterly bases,

or more frequent if stated in the IEP. The goal of collecting data is to see if the student

is benefiting from the IEP and the services being provided, or if adjustments are needed

(U.S. Department of Education 2019).

We analyzed the challenges and/or benefits that teachers have reported during

the interviews regarding measuring IEP goals in a virtual environment during the

pandemic. However, not all teachers and therapists were able to collect data during the

pandemic. As one therapist explained, collecting accurate data in an online environment

was almost impossible due to the lack of quality technological equipment both for her

and the student. Also, not always being able to evaluate the student was reported.

> So, that is an excellent question that I am still trying to figure out the logistics of. Even seven months later, because I don't feel like the data, I can collect is valid. Sometimes I don't know if the kid's producing the best speech sound they can, and I don't want to penalize them for the technology not being good. So, I've been more erring on the side of caution, as far as monitoring those goals and saying like, we need time once they're back brick-and-mortar to really make any kind of recommendations. I have a student who I was projecting to be dismissed, but then the pandemic happened, and she hasn't been showing up to her zoom sessions, so I don't have any current data. So, I said, we have to wait, we've got to keep going with what we're doing until we have enough to say otherwise. And I don't want to penalize her, but I also don't know, has she regressed? Is she where she was? It probably wouldn't be severe enough to be eligible again. So, I don't want to dismiss her and then say, you know I'll figure it out. You're good. You're going to middle school. You're good. You know, my conscience couldn't handle that. And the same thing with the full-time ESE students, it's hard to know what they're capable of when they're right in front of you sometimes. It's even more difficult when it's over the computer and we also don't how much support always the parents are giving. So, they may be sitting off screen, pointing to things, gesturing thing, things when they're on mute, you know? So, it's pretty close to impossible to get accurate valid data.

There was one teacher who had to stop collecting data all together because of the

transition. Her focus was on the transition itself and to assure that the students had

access to her lesson. She mentions how not every student had access to log on to be

able to be evaluated during her lessons.

> Yeah, we weren't really looking at that time, it was more of just like making an easier transition and just doing what we can because then being at home, we can work. There wasn't much that we could do, especially if they couldn't hop on a like FaceTime call with us or anything, there wasn't much that we could handle.

Another teacher mentioned that she has attempted to collect as much data as she did in

a brick-and-mortar setting. She attempted to collect as much as she could, but still ran

into issues when students were not logging on to Zoom lessons. This put her in a

position where she heavily relied on parents to collect data for her and return what they

collected. She also had to ensure that the parents were properly evaluating the student

without bias.

> I think it's going to be about the same, because whenever we're doing a lesson and/or doing a lesson with a student's particular goal in it, we're always thinking internal data. So, when my kids are at my specific reading group with me, we have certain things we have to do, and like every day I'm taking daily notes, like, did they hit that mark? Did they not hit that mark? Oh, they seem to hit this mark better than this mark, so I can just go back and do it. So, I would say it's about the same. The only difference is being able to keep my one particular student on the zoom. So, making sure that we're comprehending it and making sure that his parents understand the concept to where if we're not on that zoom or for whatever reason we're stuck in the classroom handling the situation like that, they know what they're doing to make sure that when it comes time to help their child, they're on the same wavelength.

There was a teacher who had many students with emotional and social goals to

evaluate and found it very difficult to gather data in a virtual environment. Difficulty

occurred not just in gathering the data, but also in helping the students meet the goals.

Again, the teacher relied on the parents and/or caregiver to help him.

> A lot of my kids' goals are social, emotional. The emotional component is, I would say, of all of it, the hardest. We do show and tell on Fridays, or we have a science project at the beginning of the week that they share at the end of the week. So, then they're learning "Thank you Mr. Allen, thank you for asking me to share." And then they share, and you would tell them, Thank you." So, we're working on that cultural environment, but beyond that, we don't get a lot of share times. So that social goal, I am finding very challenging to meet short of when we're in a small group and I'm able to kind of let them be off mute and talk and hope that nothing happens behind them or in the background, you know. I am kinda like, "Okay, tell your grown people or your giraffes in your room that we're going off mute so be careful what they say," you know? So, I would say the social part of it is the hardest part and then the emotional part as well for their behaviors. Like I said earlier, I do have a mute button. So, if they're having issues or meltdowns or whatever, I'm not that first contact for them. It's whoever's there to help support them. So, it's harder for me, the teacher, the classroom teacher, to help meet those social and emotional goals.

Lastly, we interviewed a teacher who tried to cover every angle to collect the data and

not miss the progress or regression of her students. She mentioned that every Friday

she drives to her student's homes and drops off work packages that the students can

work on. She mentioned that it helped her see where her students are in their goal

progress and if they can't connect virtually, they still have access to the material that

they are learning that week. She has also sat with parents and explained what she is

looking for when collecting data so she can get as much data as possible.

> Yeah. So, the work that I sent home, just like in class, is their normal work, based off of the access point standards. And then some of it is tailored specifically to their individual IEP goals. So, I'm able to assess them when I'm doing things on the computer. I can assess because I do them every day. I can assess their IEP goals that way. I also have, again, the parents helping me take data because I can't be on the computer all day with them, as much as I would love to be. And the parents are doing some of their concrete work with them. So, I have shown the parents how to take data and how to record it for those times when they're working without me, and they're not on the computer and they're doing independent work.

4.4. Student and Teacher Challenges

As we expected, the special education teachers experienced

many challenges and difficulties during the transition from brick-and-mortar to e-

learning and all throughout their time teaching online. To start, many of the teachers we

interviewed mentioned the added challenges of teaching in a virtual environment as

opposed to face-to-face with the students. They mentioned how the virtual environment

made it difficult to hold students' attention and Zoom meetings including the entire class

were very unproductive because the students would get distracted and talk over one

another. One interviewee talked about this challenge in detail.

> And doing a whole class FaceTime call or zoom call did not work. Um, I found every time I hopped on with more than like two or three students at our time, they were talking over each other. I had parents coming in on the zoom calls. I had one kid who showed me every single toy that he owned in his house. So, it became very distracting.

> Definitely keeping their focus and keeping their attention for the work. Um, I have some students who based on their diagnosis. Like they really, if you're not right there with them, they're not doing it. They're not focused. So, through a computer, I can't really like keep the focus. I have a student who would shut the laptop on me. If he was done with me, he would just say goodbye and he was done. And then I would have to like get the parent and be like, Hey, we need to call, we need to get back on. But it just kept happening. But in school he kind of can't run away from me cause I'm right there and he has to sit with me.

Another common challenge experienced by most interviewees was lack of experience,

training, knowledge, and access in relation to technology. Many teachers had never

taught online before the COVID-19 pandemic, so they were unfamiliar with the ins and

outs of how to do so. They also received little to no helpful training on how to use the

different online programs. One interviewee mentioned the following regarding this

issue.

> Anything like the new computer programs and things like that, we were given the ability to take the training to understand Canvas—that's the program that everybody uses for online learning. They gave us the ability to train in that program, do mock trials, adding a lesson, different things like that within the Canvas program. But to be honest with you, as far as any other trainings, no because at that time in point we didn't know what would we need.

However, another educator had the following experience with technology training.

> Literally Canvas is a blank canvas. There was no training. There was trainings, but they were not very helpful. It was more, I think it's more my learning style that I had to just get in there and just make it or break it. So, there were quite a few trainings for during those two weeks, (the) time where we were supposed to open, and then we didn't open, that offered support for the new curriculum that we got this year…because we got new curriculums in every subject, because why not? And, you know, so there was quite a bit of training that was offered for us. But it wasn't practical training. It was more like, this is your book, and this is what you're supposed to do with it. It wasn't field work.

Yet another educator had the following experience.

> The ESE department did have a program that we were using during that we could have used during the spring. But unfortunately, it wasn't super user-friendly. The program itself is great, but if the kids or the parents, or even the teachers have never used it before, it's not really user-friendly for first-time use and to be away from the classroom and not learning how to use it altogether.

Based on these accounts, we can see that there was a lack in helpful training to provide

the teachers with the proper knowledge to make this transition successful. Another

issue surrounding technology that came up quite often was the challenge of access to

the technology that was supposed to be used during the e-learning transition. One

educator mentioned that, in the beginning, the school only was able to give out one

computer per family that needed one regardless of how many students were in that

family. This meant that if one family had two students and no computer of their own,

those two students had to share one computer to complete their daily schoolwork.

> There was only like one device per family. So, if you had multiple kids e-learning, that didn't really help you very well.

The other issue regarding technology access that came up was the issue surrounding

lack of access to an internet connection. Some students didn't have a computer at

home and this was solved by giving out computers, but if a student didn't have a

computer at home, sometimes they didn't have internet access at home either. One

teacher explained such a situation.

> So, again, that also could be on either end, knowing whether the kids have access. I'm fortunate enough that I know all of my students do, but I know lots of SLPs who work in some of the lower socioeconomic schools. They have students who don't have internet. You can give them a computer all day, but if you don't have the means to get them online, that doesn't really serve the purpose.

Another set of challenges that the special educators faced regarded the transition back

to some face-to-face classes while still hosting virtual classes, also known as mixed

classes. Many of the teachers found it to be extremely difficult to effectively teach mixed

classes as they constantly had to deal with new challenges and disruptions that

ultimately lead to an inconsistent class flow and lost class time, as is exemplified in the

following account from an interviewee.

> I do know, for us, we are having to simultaneously teach—meaning we are having our students in the class and trying to teach them while, at the same time, we have e-learning students who are on say a zoom call or something like that. And we're trying to teach them at the same time. In my specific classroom, we have our students that are in class and then, normally during our downtime for our e-learning students, let's say we have music, I have the students' music and then my co-teacher will have my e-learning students on the zoom call teaching them their lesson or, while we're outside at recess, one of us has the kids at recess… one of the kids is on a zoom lesson, something like that.

> And then what's exceptionally difficult is we have brick-and-mortar students, we have e-learning students, and then, when we have a student that has severe medical disabilities and then there's a time where those medical difficulties prevent us from getting onto zoom and teaching him that lesson. So, there are days when it's like, well, this one e-learning student wasn't able to get any lessons across on zoom because of his medical disability. So, it's very hard to make sure, like I said before, that they're getting their services and making sure that they are getting what they need from us, but then, at the same time, making sure that they're actually physically able to be there.

> I have one student who could have a minimum of one seizure during the day up to we've had 30 seizures a day. So, at that time it's like, Hey, if we can get you in on a zoom and hand you one lesson, that's a huge success because not only are they at home because of this, but then we've got that complication where I've got another student where we have to take to the office a minimum of three times a day to make sure that their sugar levels are in check because, if they're not, then that child has to go home and therefore they're losing even more time for us to give them their lessons.

Another special education teacher added the following.

> Honestly, I think my biggest challenge is just trying to balance everything. Lesson planning for brick-and-mortar students for multiple grade levels and different IEP goals is a challenge in and of itself. But then having to do multiple grade levels, brick-and-mortar, and e-learning, and juggling two different schedules and zoom times. I really have the mantra, "It gets done, it gets done. If it doesn't, we'll do it tomorrow." And that's pretty much all you can do because it seems like every day, we're getting a new schedule in the classroom with brick-and-mortar students coming back and then having to adjust master schedules for the whole school. So, I feel like I've been a little more organized this year. But really not beating myself up if everything doesn't go as planned, has been probably the biggest thing. Cause I think every teacher that is doing both can attest that this has been the most tiring school year.

The special education teachers also mentioned challenges regarding building, keeping, and/or maintaining a rapport, or social connection, with their students, something that many of them identified as being a very important aspect of teaching special education. One of the interviewees mentioned this regarding the lack of a rapport with the students.

> Just from if you know the student is doing better in a brick-and-mortar situation to an e-learning situation. There are students that need that physical reassurance. As far as a high-five or you can give them a smile, you can tell them good job, you can give them a thumbs up, but there are those students, they need that physical reassurance, like high five or, Okay. Here's your reward because you did so awesome! I'm going to go sit with you in the reading corner, and I'm going to read your favorite book to you. The ability for the child that is physically handicapped to being able to physically help them with manipulatives, to figure out the solution to the problem. Or if we're doing a science project that consists of coloring, cutting, writing, and that student requires hand over hand with those particular activities, you can't do that with them. It'd be like, Okay, student B, I need you to cut out the ghost. And then I want you to color him blue on top and then green on the bottom. It's like, I physically know that you need hand over hand attention to help finish the project, but I can't give it to you because we're on a virtual, we're on screen.
> There's just no way that you can see my smile. You can see my thumps up, but then it's almost in that situation where they can feel the pride coming off of you and it, and it goes to them. I mean, I'm a very emotional teacher. My kids are doing awesome. I want them to see and hear me. When you grasp the concept and you're able to answer that question, I want to be able to give you a high five or an elbow or a hug. And if you're on that screen and you grasp that concept, you can hear it in my voice, you can see my face, but you're not going to feel it. And nine times out of ten, for our kids, they need to feel that, whether I'm physically touching them or not. It's a complete loss.

Not only was there a loss in the social connection between teacher and student when they transitioned to e-learning, but the special education teachers mentioned noticing a loss in social connections among the students themselves. One interviewee described it in the following way, also commenting on the students' attitudes towards the e-learning situation.

> Yeah, they were definitely grumpy. They didn't like being at home. They missed their friends; they were getting sick of being around their parents all the time. They were confused why they weren't going to school and they just, they didn't like it. It was a very like negative time because sometimes they're like, yeah, it's fun to be at home. But then they're like, "I miss my friends, I miss going to school," but they were happy at the same time to not do schoolwork.

Another teacher mentioned the following regarding the loss of social connections among students.

> A lot of my kids' goals are social, emotional. The emotional component is, I would say, of all of it, the hardest. We do show and tell on Fridays, or we have a science project at the beginning of the week that they share at the end of the week. So, then they're learning "Thank you Mr. Allen, thank you for asking me to share." And then they share, and you would tell them, Thank you." So, we're working on that cultural environment, but beyond that, we don't get a lot of share times. So that social goal, I am finding very challenging to meet short of when we're in a small group and I'm able to kind of let them be off mute and talk and hope that nothing happens behind them or in the background, you know.

> I mean, I have a group of babies, so they're sweet no matter what. They, every (day)... "We missed you, good morning." A lot of times we'll Zoom in the mornings and then they have lunch and they come back, "Oh, we missed you. How was your lunch? What did you eat?" I can tell that they do miss each other. Like, point in case, I had some kids that were on the other day and they were like, "Johnny, do you want to be my friend?" And he's like, "yeah, I'll be your friend." And then somebody was like, "we're all friends." Like, you know, so they, they miss, they do miss that. And I try through show and tell, that social building. I try to get them that, but there's just something about that component that does kind of suck for them.

Not only did students' social connections suffer, but for some students, not all, their progress in their education suffered too. One interviewee commented the following regarding progression, or lack thereof.

> It's kind of hit or miss. I have one student who shows up every single time and she is eager beaver and does her best. And she's teaching me about how to use zoom. And then I have other kids that are struggling, they don't perform as well. I am recalling now, last year at the end of the semester, I was working one-on-one with one of the access points kids. And it was the most productive sessions that I had because he was at home, he was in his comfort zone and he didn't have a classroom full of distractions going on around him. So, we were really able to target some skills that we kind of otherwise hadn't been able to. But, as a whole, I would say I've seen more regression than progression.

This seemed to be a common theme with the special education teachers that we interviewed as another interviewee commented the following regarding the same topic.

> They definitely got lazier. Um, they didn't do most of the work and towards like the end of it, they just, they weren't about it. They were like, I'm on a vacation. I don't need to do schoolwork. So, no matter how much I sent home and the most I could do was give them a zero for their work. But even that didn't count because technically we had to pass them anyways. So that was like, the biggest thing is like, I'm sending home all this work, but I'm not getting anything back. They didn't want to do anything, but there was no way I could force them to do it. So, I definitely think they decreased in their academics for sure. Cause they just, they're not doing the work.

However, one special education teacher felt differently regarding her students'

educational progression.

> Yes. And I've seen it, I've seen some that are not gaining as well as they did pre-COVID and I've got one that is doing so awesome with being more independent and their work. And then I've got two that I can't say they're not regressing, but it's just taking longer for them to pick up. That point that we're trying to teach them. But again, we've talked to them, we're like, Hey, look, we know that this is a little bit more challenging, but at the same time we know that it's something you can do. We're just going to try this and see how it works. And then they know that if it's not working out, then they know that the next day we'll readjust and we'll rework that lesson with the students a different way to make sure that they get more support time.

Finally, one last challenge that was common among all the interviewees was

the noticeable increase of responsibility that was required of the students' parents, legal

guardians, and/or whoever was at home with them throughout the day. During the

transition and throughout the e-learning experience, caregivers have had to step-up at

home and really help their child with accessing their education virtually. Some of the

special needs students' disabilities hindered them from being able to access and

complete their schoolwork on their own. The following is one recount of this challenge

from a special education teacher.

> I feel like when we're putting our students into an e-learning situation, that parent or that aunt, or the uncle or grandma, essentially, you're going to have to become the teacher. Even though we know that our teachers are there and they're available to help our students, they're not there the whole entire time. So, I definitely agree that it's difficult.
> So, for my particular student, his parents are not very tech savvy. And we know that dealing with this student's daily challenges, from his disability to his physical disabilities, his mobility issues and different things like that and just playing out stubbornness, I will say that about him, we have set up his Canvas very easy to make it to where everything's like a one-click option for him to do. It's a very strict schedule. They know exactly what needs to go on at one time.

Here is another recount of this challenge from a different special education teacher.

> With the access points curriculum, it's a little easier, but it still does require support from parents or a caretaker or a nurse or an older sibling to kind of help do those. Cause, unfortunately, with some accommodations I can't reach through the computer and give them to them.
> I know one of our PT therapists, his wife works at the school, and she said that he's in his living room zooming and showing the caretaker or the parent other exercises to do or stretches to do so, although the therapists are doing what they can on their end, again, it does require that an adult or an older sibling or a responsible person kind of be there because the students can't give themselves PT and therapists, again, can't reach through the computer. So, it's taking a whole village to give the kids these services they need.
>
> It's hard but, like you said, it takes a village because I feel like, as ESE teachers, we wish that we could do more over the computer. Like, I wish it was more of like a hologram where I could be

> there with the students. But unfortunately, we can't, and we have some amazing parents out there that are basically putting on their teacher hats and their therapist hats as well. And so, without them, these students would not be getting some of the services, but I think with pairing what the teacher's doing and then having these awesome parents at home that are able to help and assist with the learning has made it successful.

Not only have parents had to step up and play the role of teacher as well as parent, but they have had to make very difficult decisions regarding their child's health, safety, and education. One such decision is whether to send their child back to face-to-face learning during a global pandemic, risking their health and safety if they do, but risking their educational progress if they don't. The following is a recount of this challenge from one of the special education teachers that was interviewed.

> I only have one e-learner and he is fortunate that his mom is a stay-at-home mom. So, she's home all the time anyways. And they also have a nurse that comes in. So, on the days that the nurses there, she helps with his e-learning. I know from personal experience, my stepmom, I have two younger brothers that are in elementary school and one of them is in fifth grade, he went back brick-and-mortar, but the younger one, who's in first grade, was doing e-learning for the first part of the year. And it was becoming a lot because having multiple kids in the house and trying to work and do e-learning was a struggle. So, I definitely am lucky in the sense that my e-learner that I do have, his mom is available all day. But I know that's not the case for everyone. And I know that's why a lot of parents struggled with the decision of, "Are we going to send them back to brick-and-mortar or are we going to keep them at e-learning, because the world is opening back up, parents are going back to work?" They have other things going on in their life and not everyone has the availability to stay home and be able to assist 24/7 with work. So, it's definitely a challenge.

These special education teachers, students, and parents all faced a multitude of difficulties and challenges when the education delivery system switched from brick-and-mortar to e-learning due to the global COVID-19 pandemic.

4.5. Experienced Benefits of E-learning

Despite the difficulties encountered throughout the transition to and implementation of e-learning for special needs students, most interviewees mentioned seeing some benefits. Firstly, many teachers reported that e-learning provided them opportunities to further individualize curriculums for their students. One educator, who works with gifted students, discussed how e-learning allowed for these children to have

more freedom in their pace of learning compared to in a brick-and-mortar classroom setting. For the gifted students, he said this was a positive outcome and helped to prevent classroom boredom. Additionally, the benefit of due date flexibility was mentioned by one educator who explained the ability he now has to assign private, different due dates to each student; this allowed him to give students extra time on assignments without making the accommodation known to the entire class. Several teachers shared stories of how online learning can be useful when working with students who have different learning styles. One interviewee, who has taught multiple grades of elementary schoolers, shared her experience with being able to distribute various formats of work to her students to best fit their needs.

> I knew all my kids learned in a different way. Some learned better if you're like one-on-one with them, some learn better with a game, some learn better with like watching a video or taking notes. So, I was able to like distribute that work kind of easier. Cause I could send the games to two kids. I could FaceTime with two or three kids like one-on-one and then I could like find videos for other kids to watch. So, it was a little bit easier to get the work distributed out to them.

Another educator shared with us that they feel online education has benefited their students who are visual learners.

> And then sometimes there are the children that learn visual. And sometimes when we're teaching them a lesson, they'll grasp the concept with this, but then it kind of feels like they get more of an impact with it when they're using all online just because it's more animated and more of a visual versus how we would teach it in the classroom.

Yet another discussed success in using tactile methods via e-learning.

> The student is also a very textile student. So just last week for the last week of Halloween, all of our activities we were doing…one's and ten's trying to reinforce that with the student. And we're like, "Okay, so for every ten's you're going to use the candy corn and for every one's, you're going to use a sweet tart." So, we would literally have them put them next to each other cause not only were they textually different, it was something different than his normal manipulatives he can have. We also know he would have fun doing it. And then, two, he also got a threat at the end of it.

For some of our interviewees, transitioning to online learning changed the way they or their students accessed materials; there were some positive occurrences of this. One educator, who teaches technology, discussed how his type of course material was

conducive to online learning due to his students routinely using computers when they were in a classroom setting. He shared that e-learning has provided his students with one-to-one access to computers meaning multiple students no longer have to share one computer. In his words,

> It just seems to be a little bit more efficient because now I know that I'm one-to-one. There's nothing about having to share computers, too. Like all of that is taken out because everyone has a computer or a device they're working on.

We believe it is important to mention that this experience is not universal. As mentioned by many other educators we interviewed, access to technology and Internet for e-learning has been an issue for many students and their families. Another benefit mentioned by our interviewees was that providing materials online prevents students from misplacing papers they may need to reference later. One teacher shares how their students can access study materials easier online and are enjoying not having to keep track of physical materials.

> Normally, in a classroom, they put it on paper. They might put it in a notebook, it gets lost, it gets crumbled up, whatever… They seem to be able to go on to Office365 and study that easier.

Another topic many interviewees mentioned was how e-learning has changed the way students and teachers are able to cope with behavioral issues or medical events. When discussing her students with autism spectrum disorder, one teacher shared that having the option of turning off a student's camera feed has aided in making meltdowns less distracting to other students in the class.

> When they're stemming or when they're having a breakdown or a meltdown, I can turn the camera off. I can still hear them, but my other friends don't have to be distracted by them. And they're still exposed to the curriculum.

Additionally, some teachers reported that their students with medical issues have seen benefits from e-learning at home. She shared regarding one of her students,

> He has a lot of medical issues. So, for him to be at home, his seizures have been down a lot because he's not having to necessarily wake up at a certain time to be at school.

Learning virtually was reported to be more flexible for these students as they deal with medical conditions that previously would have negatively impacted their education as shared by this teacher who was quoted saying, "for some of our students that have outside therapies or that have medical issues or things like that, the flexibility of e-learning has been beneficial." Another educator explained that e-learning has allowed for them to adapt to a student's time constraints that are caused by seizures, allowing them to still receive instruction despite being unable to join the class at its normal time.

> If my student had had a seizure and normally goes and he falls asleep afterwards, we cannot wake that student up because normally if we wake them up while they're asleep, they'll go right into another seizure. It does give us the flexibility to say, "Hey, I can't come to the zoom lesson at 1:15 because we had a seizure," and we're like, "Okay, that's fine. It's not a problem. We can either do it at this time instead of this one and we'll switch the lesson out," or, "Hey, I know school lets out at 1:55 but if he's up at 2:15 and you want to do the zoom lesson then, hey that's great because I don't leave the building until three o'clock. Or even if it's not until six o'clock at night, we'd be willing to jump on there and do it." So, I will give it props at least on our side for our flexibility.

One of the most discussed benefits of e-learning was the ability to work with students one-on-one more easily and frequently than in a brick-and-mortar classroom setting. One interviewee shared how they have seen students improve due to this.

> Students that I have are making gains because there is an opportunity to have a little bit more intimate, private conversation with them. I can pull a small group of three or four kids and work on a skill or reteach a skill.

Another mentioned that online education has given her greater opportunity to notice when a student is not understanding a topic and needs additional assistance or time.

> …but just to get that one-on-one time with that student and it feels really important cause they were like, I was able to get down to like, okay, they're really not understanding this topic, so we need to go over this more…I can focus on these kids here and give them the intense lesson and I'm not restrained to a time limit. So, if we get into learning something and we're on a tangent to learn, I can do that.

Related to this, educators also discussed feeling that they were better able to focus on the student they were aiding without having to split their attention to monitor the rest of the students in the class. We see this topic elaborated on by a first-grade teacher:

> Yeah, like I said before, being able to have that one-on-one or that three or four on one attention to really attack a skill, or a detail, or a spelling pattern or something, even in a small math group, and not have to worry about what's going on with the rest of the class. Are they engaged? Are they active? Are they on task? Are they rolling around on the floor?

Some educators discussed the ways that online learning has benefited them in regard to communication with parents. One interviewee shared how the opportunity for immediate feedback to parents has been a positive experience, leading to better communication and follow-up on assignments.

> I can reflect with Johnny's mom on what I just saw him do, good or bad, but I can give her immediate feedback and say, "Now in the independent time, work on him with this." And I can give her that skill or I can give her that takeaway that I could send home in a folder during the school day, but it probably wouldn't get done. So now she's got an hour of time, she needs to do some work with him, and she knows exactly what to do because "XYZ" happened in this class today. So that is a huge benefit, I think, as a primary teacher for any kid, but especially my ESE kids.

Additionally, some educators reported that implementing new technology has created a need for parents to be more involved in their student's experience. While this has potential to be problematic, as discussed by other educators, it can also open the lines of communication between parents and teachers or allow for parent education to occur.

> Some students are unable to operate the technology independently… a lot of the parents are having to sit there with their students, we're able to do a lot of parent training which we're not generally otherwise able to do.

Lastly, some of the interviewees noted that despite the lost social aspects of brick-and-mortar classrooms, some students are benefitting from learning in the home. One educator discussed a student whom they saw improvement in due to the increased comfortability they experienced by working from home.

> I am recalling now, last year at the end of the semester, I was working one-on-one with one of the access points kids. And it was the most productive sessions that I had because he was at home, he was in his comfort zone and he didn't have a classroom full of distractions going on around him. So, we were really able to target some skills that we kind of otherwise hadn't been able to.

5. DISCUSSION

Overall, the findings of our study highlight that the transition to online learning brought about by the COVID-19 pandemic has created hurdles for the special educators of Hillsborough county. We found that school districts were forced to implement changes reactively instead of proactively due to the unforeseen nature of an evolving pandemic. These changes presented a variety of challenges for special educators' teaching experiences, creating negative feelings of unpreparedness and stress as the majority of the responsibility for these adjustments fell directly on them rather than school administrations; this led to teachers utilizing one another for support and solutions while implementing third-party resources and other new strategies to cope with the lack of training received during the transition. A variety of styles and approaches were utilized by our interviewees in an attempt to meet the needs of and maintain the engagement of their students. Through continued efforts and constant flexibility, the educators we talked to were able to find ways to achieve a functional virtual space conducive to the education of students with disabilities although they continued to face difficulties around IEP goal attainment and tracking. Additionally, through our interview process, it was discovered that the transition to virtual learning was not all negative. Online learning, when approached correctly and with sufficient resources, could yield benefits for special needs students; these include individualization of curriculums, increased flexibility, and more one-on-one time with educators.

Previous studies have reflected a lack of consideration for the needs of students with disabilities in the creation of online learning resources; this point is strengthened by our findings as we saw teachers struggling to utilize existing platforms successfully with their special needs students. Our study found that online learning can be lacking in

services, accommodations, and monitoring; this is also reflective of Burdette's findings in 2013. Our findings also support the findings of Tremmel's study which found that many educators encountered issues with IEPs when instructing virtually. Additionally, previous studies have found, similarly to ours, that the flexibility of virtual education may be preferable for some students and teachers when compared to traditional methods of instruction and scheduling.

While previous studies have investigated the impacts of major disruptions, such as those natural disasters have on education, research on the COVID-19 pandemic's impact is still sparse as the pandemic is undergoing and changes continue to be made to the education system. Additionally, research regarding students with disabilities and e-learning is largely lacking. Our study begins to shed light on the adaptations special educators have had to make during this event to make e-learning a viable option for students with disabilities, thus combining two topics that have been previously evaluated separately.

The practical importance of our study is that it can serve as a guideline or basis for quality education, in which our findings illuminate how teachers ensure quality education to students with disabilities via e-learning methods. The information found through this study also serves to build an understanding of technology accessibility, the ways in which online instruction can be made accessible, practical, and beneficial to students with disabilities. This may be applied to the changes made during the current pandemic, in the face of future disruptive disasters, or for the benefit of students who wish to learn virtually due to personal or medical issues. By understanding the struggles

educators have faced, future implementation of e-learning and instructing methods can be improved, leading to a more effective educational experience for the students.

One limitation of our study is a lack of generalizability due to the sampling methods used. Additionally, the inductive research we conducted is not able to measure every potential impactful element within the issues of special needs education and virtual learning. The snowball sampling method we implemented could lead to biases due to a narrow range of participants. While the findings stated may not reflect the experiences of all special educators in other school districts or geographical areas, they do serve as a representation of the E-learning transitionary period's struggles as experienced by the individuals we were most interested in studying, the special educators within the Tampa Bay area. Aside from our sampling method, the self-reporting nature of our study has potential to lead to inaccurate reflections of one's true experiences due to discrepancies in individual perspectives, shadowing by emotion, or inaccurate memory recall. Despite this, we feel that the interview structure of our study has provided valuable insight into some of the educational issues brought about by COVID-19 and should encourage additional research within the field.

For a broader view on the experiences of special educators who are working with virtual education platforms, future research into this topic could be conducted with a larger group of participants. This participant group could be made narrower than the one we used, such as focusing on one grade level, to acquire a deeper understanding of a particular group. Conversely, the study could be conducted with a wider range of participants from more grade levels, types of schools, and in varied locations to generate more generalizable data on their experiences. This type of study could also be

conducted again with observational inclusions in addition to the self-reported data from

interviews. Lastly, other related issues in this area could be investigated. It may be

beneficial to investigate the experiences of transient students with special needs to

compare e-learning experiences across different locales. Another issue for further

investigation, especially during the COVID-19 pandemic, is that teachers have been

expected to engage in mixed classroom instruction as they interact with face-to-face

students and virtual learners simultaneously; the implications of this demands the

attention of researchers as quality education may be in jeopardy.

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8. APPENDICES

Table 1

Demographic characteristics of special educators

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Role	Teacher	Teacher	Speech Therapist	Teacher	Teacher	Teacher
Classroom Type	IMD to Autism & Physical Handicaps	Access Points, Cognitive Disabilities, Average IQ of 70	Access Points & General Education	Private school/ unspec-ified	Autism & ADHD	Varied
Grade Level	Elementary K-5	3rd to 5th grade	Pre-K & Elementary K-5	2nd to 5th grade	1st grade	6th to 8th grade
E-learning Mastery	First-time user	First-time user	First-time user	First-time user	First-time user	First-time user

Table 2

Recruitment message for special educators

Good Afternoon,

I am reaching out to you as a potential participant for a study I will be conducting as a USF student currently taking my Sociology Senior Seminar class. This semester, the research that my group and I decided to conduct is focused on Education and we believe your insight would be of extraordinary benefit to our study. We are taking a lead from the United Nations Sustainable Development Goal of Quality Education but have chosen to focus on this issue on a local level (Tampa). The qualitative research we will be conducting is focused on how COVID-19 has created new challenges/difficulties for students with special needs. If you are interested, we would like to interview you regarding your perspective as a special educator to learn about the challenges you are running into or observing. You would not be required to disclose any names or specifics; maintaining the privacy of you and your students is of utmost concern to us. In the case that you do disclose any names during the process, they will not be recorded; additionally, we will be using pseudonyms and referring to schools only through a numbered system (example: "School #1). Interviews would be conducted via an online video chat room (Zoom) to obtain qualitative data. Again, please note that this research is for my Sociology Senior Seminar Class at USF and is not being performed as official USF research. My group and I would greatly appreciate your participation! If you know of another special education teacher that you think might be willing to participate, please forward this message to them and let me know that you have done so.

Thank you so much for taking the time to read this email!
- Student Signature

Table 3

Interview questions

_____

1. What were your personal emotions regarding the transition to online when it first happened?
    a. How has that changed, if at all?
2. What was your view of using online education for special needs students prior to the pandemic?
    a. Was the transition due to COVID your first experience using online teaching methods for your students?
    b. Has your view of online teaching/learning changed since you began using it? If so, please explain.
3. Tell me about what procedures your school implemented during the transition to online.
4. How has the school administration helped you transition to online?
5. Did you feel that you were properly equipped for this transition? Did you receive any assistance or additional training from your school to aid you in adjusting your teaching methods or using unfamiliar programs?
6. How will special needs students' accommodations be met in a virtual environment?
7. How will speech and occupational therapy be integrated into special needs students' academics in a virtual environment?
8. What tools are you, the educator, providing the parents to help their special needs children succeed in a virtual environment?
9. How will you, the educator, assess each student for IEP purposes?
10. In the virtual environment, how are you, the educator, measuring the IEP goals set for each special needs student?
11. What techniques are being used in the virtual environment to keep children with special needs engaged?
12. Tell me about what new teaching techniques you have implemented throughout the transition.
13. What techniques have been most helpful and why?
    a. Additionally, would you like to share any experiences regarding methods that did not work as anticipated?
14. What challenges have you faced throughout this transition and how did you overcome them?
15. Have you noticed any changes in students' performance?
    a. Do you have access to your usual metrics for performance? Do they accurately reflect retention or quality learning experiences?
16. Have you noticed any changes in students' attitudes?
17. Are there any beneficial elements of face-to-face learning that you feel have been lost due to transitioning to online? (What was the element, why was it lost, what benefit did it have, how has this been observed, etc.)
    a. Additionally, have you noticed any benefits to online learning for your students?