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Teachers' Perceptions of the Effects of Remote Learning

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Abstract

This study looked to examine the effects of remote learning on teachers' curriculums. In the study, the researcher sought to examine how teachers have had to adjust their curriculums and lessons in this time of remote learning to make sure they are reaching all students. Previous research has been done on this topic that has been both critical and supportive. A major theme amongst the critical research includes that communication has been more challenging, and amongst the supportive research, there is a multitude of technology options available. This type of teaching and learning has been an adjustment for everyone, students and teachers alike. The methodology used was a Google Forms survey because it remained anonymous and was open to all teachers. The survey was left active for seven days and then closed. A Google Forms feature, the frequency of responses, was used as an analytic method.

Teachers' Perceptions of the Effects of Remote Learning

This study sought to examine what the effects of remote learning are on a teacher's curriculum. The study will examine both the strategies that worked well/are working well for teachers in this time of remote learning while also discussing which strategies have not worked. In the study, the researcher also examined how teachers have had to adjust their curriculum in this time of remote learning to make sure that what they are planning to teach can reach all students.

The study is warranted because remote learning is prevalent in our everyday lives today. Elementary, middle, high school and college students have had to adjust their lives to learn in a remote environment. Remote learning is not easy for a college student, so you could only imagine the effects that it has on younger students. This type of teaching and learning is new to all, thus there has been an adjustment period for everyone, students, and teachers alike. Therefore, the study examined the effects on the teachers and the adjustments and changes that they have had to make to their lessons and curriculum.

The method that was used in this study was a survey. The survey remained anonymous and was open to all teachers with a minimum of one year of teaching experience and who have been teaching in this time of remote learning. The survey was conducted using an online format both by distributing it with permission, throughout the district that the researcher works in using a confederate, as well as posting the survey on the researcher's social media.

Bozkurt and Sharma (2020) emphasized how the coronavirus pandemic has affected schools in the switch to remote learning. Due to the pandemic, there are approximately 1.5 billion learners who had to learn remotely because of the closures that took place because of the pandemic (Bozkurt & Sharma, 2020). Bozkurt and Sharma (2020) discussed important definitions. Bozkurt and Sharma, 2020 stated, "online distance education involves more than simply uploading educational content, rather, it is a learning process that provides learners agency, responsibility, flexibility, and choice. It is a complex process that requires careful planning,

designing and determination of aims to create an effective learning ecology" (Bozkurt & Sharma, 2020, p. ii). Teachers are tasked with the responsibility of ensuring that their students are still learning the required content, while also trying to incorporate remote student interaction that will aid in a student's development.

In the article, "Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic," Ali (2020) discussed how online learning is necessary during the times that we live in right now. The transition to online learning is a technological adjustment but also a teacher's approach to teaching and the instructional methods they use. The key to success in remote learning is preparation regarding curriculum and assessment practices (Ali, 2020).

Distance and remote education are similar terms but there are differences between them. "Distance education is an interdisciplinary field that has evolved over time and that has served well in responding to learning needs and in guiding open educational practices (Bozkurt, 2019a; 2019b; Zawacki-Richter et al., 2020)" (Bozkurt & Sharma, 2020, p. ii). Remote education means that there is a spatial distance between teachers and learners, while distance education provides different means to engage students in their learning (Bozkurt & Sharma, 2020).

Marshall, Shannon, and Love (2020) discussed how the effects of the pandemic and the switch to remote learning have impacted the teachers. Marshall et al. mentioned that, "previous research has shown that while many teachers find online instruction to be rewarding, those who are new to it tend to report having to deal with increased workloads and a variety of challenges related to using the technology, communicating with students, organizing synchronous sessions, and measuring student outcomes" (Choi & Park, 2006; Conceição, 2006) (Marshall et al., 2020, p. 47). Research studies have shown that online learning has been pleasing for some teachers and more challenging for others. For teachers who are not accustomed to technology and for those who did not have time to learn the technology, the shift to remote learning has given them many challenges that they have had to try to overcome. The switch to remote learning because of the pandemic was admitted by Marshall et al. to be emergency remote teaching because it is a temporary shift, and it was not planned (Marshall et al. 2020). This sudden change has been a challenge for teachers.

The COVID-19 pandemic has been a challenging time for many individuals. During the time of uncertainty, as teachers we can consider what is the heart of a teacher. Koerner discussed this idea that between a teacher and a student, there needs to be connectedness in the relationship (Koerner, 2020). There also must be a connection between the teacher, student, and subject. Koerner proclaimed that connectedness is crucial for successful teaching. Teachers should have an optimistic perspective because it will be more authentic, and it can be an inspiration for our students (Koerner, 2020). As we teach remotely throughout the pandemic, we should take our students' interests into account, and that is what should be used to guide our instruction. Koerner said that, "for educators, regardless of role, our purpose is to connect with other human beings through our teaching" (Koerner, 2020, p. 173). We can positively impact our students through our teaching, which is at the heart of a teacher. In the following section, we will look at previous research on the effects of remote learning on teachers.

Literature Review

Previous research that has been done has proposed that the sudden switch to remote learning has had an impact on teachers, whether supportive or critical. Teachers have experienced many challenges that they have had to overcome, including technological issues, still they have been able to adapt to the technology and make their remote classrooms a fun and engaging place for students. A hindrance of online learning is the decrease in student-teacher action that is strengthened with face-to-face instruction (Park & Kim, 2020). This adaption to online learning has impacted teachers not just in the United States, but worldwide. Two themes emerged throughout examining the research. The following studies reflect the theme of research that is critical of remote learning.

Research that is Critical of Remote Learning

König, Jäger-Biela, and Glutsch (2020) examined how early career teachers maintained social contact with their students and the factors that influenced their teaching while schools remained fully online for the remainder of the 2019-2020 school year. Konig et al. discussed that during remote learning teachers had to utilize a variety of digital tools as well as employ new instructional strategies to help make online learning successful for themselves and their students. Amongst trying to learn the technology, teachers are responsible for trying their best to keep a line of communication open with their students. König et al. mentioned in their article, that it is important to look at a teacher's self-efficacy about the situation because that will be a predictor of the success that remote learning has for the students (König et al., 2020). The findings of their study showed that teacher self-efficacy is important in achieving the goals you aim to achieve. It was also concluded that professional development is necessary for teachers of all career statuses because the results showed that even early career teachers did not have all the digital skills they needed while teaching remotely (König et al., 2020).

Daniel (2020) discussed the challenges that this pandemic has had on education and teachers. Daniel stated that since teachers are going to be teaching remotely, and we do not know the extent of how long it will last, in their curriculum, teachers should include varied assignments putting COVID-19 in different contexts, historical and global. Teachers should also create their assessments first to help design their curriculum. Our education systems have grown in the last five decades, but the biggest challenge has been the COVID-19 crisis (Daniel, 2020). In the article, it discussed how teachers should work with what they know and focus on giving their full attention to trying to reassure students, rather than trying to learn new technology in a short amount of time. Some schools have had plans in place to implement technology more in their teaching practices. Still because they were meant to be enacted systemically, the sudden change to remote learning did not allow for the digital issues to be uncovered and fixed (Daniel, 2020). As a result of this, teachers did not have the proper training. When planning curricula, teachers should make learning interesting for the students by using a multitude of different assignments, while also ensuring that their curriculum is still aligned with the required assessments.

Marshall, Shannon, and Love (2020) noted that while people support online learning as viable, many people still view it as inferior. There are both supporters of remote learning as well as opposers who believe that face-to-face interaction is most important for successful teaching and learning. Marshall et al. (2020) emphasized that this transition to remote learning was not a

normal one due to the major circumstances that caused it, the COVID-19 pandemic. In this study, teachers were surveyed about their experiences teaching remotely. A challenge that most of the teachers faced was that they had never taught online before and many of them did not have the proper training (Marshall et al., 2020). Many teachers faced a challenge of not being able to provide the best instruction partly because they did not have a lot of materials that were in their classrooms. Another challenge that Marshall et al. (2020) discussed was keeping their students motivated.

Bubb and Jones (2020) discussed the perspectives that different stakeholders had during the transition to remote learning because of the coronavirus pandemic. A major concern amongst teachers was the pressures that they faced, due to the pandemic. Bubb and Jones stated, "they were concerned about difficulties caused by their unfamiliarity with how to deliver high quality teaching and learning remotely, without the immediate verbal and non-verbal feedback that the classroom offers" (Bubb & Jones, 2020, p. 210). In the classroom environment, teachers can easily gauge student understanding or difficulties based on facial expressions, body language, and questioning. Bubb and Jones mentioned that the Education Endowment Foundation concluded that during the times of remote learning, the quality of a teacher's instruction is more important than the delivery of the lesson (Bubb & Jones, 2020). Lessons should be meaningful and memorable for students. Educational technology had to be adopted by teachers, and this was harder for schools/districts that did not have a major focus on technology before the pandemic.

The coronavirus pandemic may also be causing anxiety in teachers. Li et al. conducted a study in which they found that school closures exacerbated many negative emotions in teachers. In the study, 88,611 teachers were included, of those, 12,110 showed anxiety during the COVID-19 pandemic. The prevalence of anxiety was higher in women than men, and it is suggested that anxiety may increase greatly because of the pandemic (Li et al., 2020). Most of the participants indicated a level of anxiety, with the most being mild anxiety, and the overall prevalence of anxiety among teachers was 13.67%.

There are 300,000-400,000 public school teachers who live in homes without digital devices or internet access (Martinez & Broemmel, 2020). Leaders and teachers in K-12 schools demonstrated identifying immediate priorities and communicating with the individuals involved during the crisis. In studies surrounding schools in crisis, it was discussed that effective communication is necessary. Before a teacher can help students manage the pandemic we are facing, they must first address and cope with their own anxieties about the situation. Stressors that teachers faced conducting remote learning included the uncertainty of the situation, having to adjust to remote learning and technology tools, as well as a lack of internet access. Many teachers were also concerned with the mental health of their students, and the effects it would have on equity and food supply.

Teachers were considered essential workers during the coronavirus pandemic. Effects on teachers that were identified included confusion and stress. The stress on teachers can lead to teacher burnout in the form of lower confidence in themselves and the possibility of quitting. Remote learning has been a challenge for many teachers, and this, in part, has to do with some teachers having competing responsibilities at home caring for their children or family members (Kim & Asbury, 2020). A teacher's identity is multifaceted, with six components: self-image,

motivation, commitment, self-efficacy, task perception, and job satisfaction. A theme that was found amongst many teachers was the uncertainty of not knowing what was going to happen moving forward. Many teachers had a challenging time because many students did not engage in the activities that they were using. Another source of anxiety for teachers was their concern for vulnerable students. Teachers like to organize and plan; however with the uncertainty of COVID-19, it disrupted this.

There are traditional technologies that teachers use in the classroom, like Smartboards or PowerPoints, but it is the integration of technologies that will create a strong online learning environment (Spoel et al., 2020). Most schools and teachers' technology systems were not prepared to make the switch to remote learning as quickly as it needed to be done. It has been shown that developing lessons to be used with online teaching was more difficult than expected. A factor that plays a role in whether teachers incorporate technology in their classrooms is their perception of technology. Many teachers were unprepared due to the short transition period of switching to remote learning due to COVID-19. After the study was done, teachers mentioned that it was difficult to monitor a student's well-being and if they were learning and understanding.

Many teachers are trained in the traditional approach to teaching, including assessment practices. In recent years, there has been a government presence in providing money for equipment for schools, students, teachers, and administrators to help integrate the technology into education (Leacock & Warrican, 2020). It has been shown that the previous use of technology in education was limited to sole control of it being placed on the teachers, where they would use it to present information to students. When schools had to switch to online teaching, a concern for teachers was how they would give examinations to their students to assess student knowledge. A huge challenge for teachers has been engaging students in online learning as well as knowing and learning and being prepared to teach students using different modes. Teachers who were teaching in the COVID-19 pandemic had to overcome adverse challenges and use technology as a tool in their classroom (Leacock & Warrican, 2020).

Due to the coronavirus pandemic, institutions, and schools must accept technology and make use of it. The concern during this time was if schools could embrace online learning in the enormous realm that would be needed. Areas of difficulty include downloading errors, login issues, and audio and visual problems. Another difficulty is that teachers cannot give all students the personal attention that they need (Dhawan, 2020). During remote learning, it is also hard for our students to practice effectively what we have been teaching them. Teachers are also experiencing stress, fear, anxiety, depression, and insomnia. Remote learning has made it challenging for teachers to communicate directly with their students and to experience human connection. Teachers were tasked with the difficulty of changing the lessons that they would use in the physical classroom to be able to be taught in an online capacity that aligns with the curriculum while engaging students.

Teachers have been critical of remote learning in the sense that there is now decreased interaction, problems with infrastructure, and a lack of equipment. After the health sector, education is the second most affected due to the COVID-19 pandemic. Disadvantages to remote learning include schedule and time limitations, infrastructure issues, economic difficulties, and

network problems (Hebebci et al., 2020). While teachers do not believe that remote learning is as effective as face-to-face instruction, it is necessary during these times to help students continue their education. A major limitation has been that the teachers and the students are not learning in the same environments, and there is not the possibility of student follow-up. There are mixed opinions regarding lesson length.

Remote learning has challenges for all students and teachers, but particularly for those who are disadvantaged. Ferri et al. found technological, pedagogical, and social challenges through their research (Ferri et al., 2020). Technological issues have to do with unstable Internet connections, and if students and teachers do not have the devices needed. Other technological challenges include both the teacher and the student lacking skills in using technology as an educational resource. Pedagogical challenges include a teacher's lack of digital skills, and the absence of a teacher's social presence within the classroom space. Another pedagogical challenge includes having to find interactive materials to engage and motivate students, as well as a limit in providing student feedback. A social challenge includes the lack of interaction between a teacher and their students (Ferri et al., 2020). Ferri et al. mentioned in their article the importance of providing teachers with the adequate training that they need to help support them through this new time of finding interactive online tools to use in their lessons. A challenge that teachers face is how to support special needs students with learning activities that they can achieve.

The switch to remote learning has presented a greater challenge for special education teachers, especially for those with significant support needs. Some of the challenges mentioned include inequity in resources, needing to rely on at-home support, and changes to the definition of what it means to be a teacher (Schuck & Lambert, 2020). Teachers were uncertain about their students' access to resources and the grading process. Another challenge for special education teachers was how to increase student engagement. The inequity of support and resources was a challenge that teachers faced because there was a variation as to how much support students received at home. This was a challenge because some students in the classroom needed a significant level of assistance, and if they did not have support at home, it was difficult for them to make the meeting. Another challenge that occurred was that teachers had to rely on at-home support, and in turn, they were made aware that what their students were learning in school was not being applied in their home environment. Teachers had to adjust their instruction to be taught online, and they were also designing professional development for parents to help them become involved in their child's education while at home (Schuck & Lambert, 2020). A challenge that teachers experienced was how their teaching itself changed. The use of technology took away the relationship between teacher and learner, and it was a barrier to communication. Teachers also were not sure about how to provide their students with accountability and feedback. A sentiment that is felt by many, but also the participants in this study, was loneliness and disconnect. Thus, we need to acknowledge how our teachers are feeling during this time (Schuck & Lambert, 2020).

The COVID-19 pandemic had mental health challenges for children and adolescents. Mental health has significant impacts on children as it affects their emotional well-being and social skills. In "Teachers' perceptions of the impact of COVID-19 pandemic and virtual teaching on the physical and mental health of children in Kashmir: A qualitative study," Bashir et al. (2023)

discussed how the pandemic negatively impacted children and how teachers perceived the switch to remote learning. There were 16 teachers interviewed in this study, and among those, 76% of them were not comfortable with online teaching. Bashir et al. stated, "the majority of the teachers felt that online teaching is not productive as the students are not much serious in online classes and also online classes are found to be less interactive when compared to offline" (Bashir et al., 2023, p. 421). There was a lack of attention when teachers were teaching online. Teachers alike felt that the transition to online teaching was not a comfortable one for them. Online learning due to the COVID-19 pandemic altered the established routines of teaching, leading the students to be less focused. The teachers felt that with the switch to online learning there were barriers in child development. The attention and concentration of the students dropped with online learning. Bashir et al. stated, "on the contrary, in offline classes, students have direct contact with a physical teacher during class. This allows the teacher to read students' body language, and performance by cross-examination and the teacher can find out if they understand what they teach in classes. By assessing children in the classroom, the teacher can teach the student and make them understand in easy ways" (Bashir et al., 2023, p. 423). When in the classroom, there is more student engagement and teachers can better assess the needs of their students. Another category discovered in reviewing the literature was the research that supports remote learning.

Research that Supports Remote Learning

Wright (2021) discussed the benefits of remote learning. Demonstrations in science classes, as mentioned in this article, are crucial because they motivate and engage the students while they are learning science. Wright discussed conducting online science experiments through Google Meets or Zoom provides students with the meaningful and memorable learning that they need (Wright, 2021). During this time that teachers are teaching from home, a document camera can be used to display different instructional tasks to your students, whether it be the experiment or a formula. Wright mentioned that by conducting a live experiment in front of the students, using the Zoom or Google Meets platforms, the students become engaged in the experiment and ask many questions. There are many different technologies that teachers can take advantage of in their remote classrooms. One of these technologies mentioned by Wright was Flipgrid, which is a platform where students can record videos of themselves addressing a particular question. Flipgrid can be used as a tool to build community in your virtual classroom (Wright, 2021). Teachers can then have their students watch their classmate's videos and respond to them to incorporate interactions in their virtual classroom. Science teachers, specifically, can conduct different interactive experiments with their students, which can result in motivating the students to attend the remote class more.

Bubb and Jones (2020) also discussed the teacher's positive experiences with remote learning. Although there have been many uncertainties throughout this crisis, teachers worked their hardest to be positive and provide their students with a sense of normalcy and support them in any way they can (Bubb & Jones, 2020). Federici and Vika (2020) found that many teachers were still able to provide teaching and learning, maintained contact with students and parents, as well as a safe learning environment. Teachers have also been able to keep an open line of communication with their students and parents, leading to a positive learning environment for all. Another positive advantage to remote learning for teachers was that they had more time to plan their lessons. The study that was conducted found that teachers had become more proficient in using digital tools. The authors also discussed how teachers felt that they gave more useful

feedback to students while teaching remotely. Teachers felt that their relationships with parents were stronger. During remote learning, as discussed by Bubb and Jones, teachers incorporated creative activities that would be used to help engage their students (Bubb & Jones, 2020).

Using technology tools has been a benefit for students during the pandemic. The switch to remote learning because of COVID-19 was emergency remote training, defined as "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (Falcone, 2020, p. 312). Content delivery to students was still possible during the switch because of instructional technologies that were made available to students and teachers. While it was difficult to not be able to walk around the classroom, to understand the non-verbal communication of students, if we reflect on this, teachers can realize that if they teach in an authentic way, then you are in the moment with your students. This will then allow teachers to recognize if students are understanding and can foster interactions. Falcone mentioned in her article takeaways that teachers should consider because we are teaching in such uncertain times. The takeaways include no teaching is perfect, experiment with new strategies, and to be authentic (Falcone, 2020). Resilience, as defined by Falcone, is "the ability to adapt to adversity or a stressful life event" (Falcone, 2020, 313). There is a link between positive emotions and resilience. The COVID-19 pandemic and the switch to remote learning is new for everyone, and as teachers, we can use the Dreyfuss model to understand that the change can happen in phases and that it will take us time to learn, but that is okay. The phases include, Novice, Advanced Beginner, Competence, Proficiency, and Expert (Falcone, 2020).

Moving from one medium to another, pedagogically, isn't always a smooth transition. Teachers have been using technologies like Zoom to try to replicate the in-person classroom in the remote teaching environment. Henriksen et al. discussed that Bruner's folk pedagogy concept should be considered when examining the quick switch to remote learning. His four pedagogies are Do, Know, Think, and Manage, and folk pedagogies are automatically a part of our teaching practices. The online context may lack non-verbal cues and situational familiarities, but using the concept of folk pedagogies, there are approaches teachers can use in their remote learning environments. One approach is to conceive teachers as learning designers meaning that they must recreate their lessons and provide students with supporting materials to guide them while they are learning asynchronously (Henriksen et al., 2020). Another approach is to embrace the affordances of video conferencing technologies. Depending on the online platform that you use for teaching, there are distinctive features that you can utilize. An example is the Chat function on Zoom or Google Meets, which can be used for communication back and forth between teachers and students or for students sharing their ideas with students (Henriksen et al., 2020). Teachers can foster communication and collaboration by using Zoom's whiteboard feature. The COVID-19 crisis afforded teachers the ability to examine new strategies and pedagogies that they can use across different platforms, not just in the physical classroom environment, as well as strategies that teachers can use if remote learning needs to occur at another time.

Gudmundsdottir and Hathaway (2020) discussed how 1.5 billion learners were affected by the school closures. Teachers were required to learn how to be an online teacher overnight. The findings showed that even though teachers were inexperienced and unprepared, they did have moderate preparation with digital tools and were willing to do what they could to make online as successful as they could for themselves as well as their students (Gudmundsdottir & Hathaway,

2020). Before the pandemic, it was found that most teachers did not have experience with online teaching. However, the teachers had positive attitudes and were willing to try out new strategies and pedagogical approaches and could cope as online teachers even with little to no experience.

A suggestion given by Marshall and Kostka (2020) was to use a Flipped Learning Approach while using remote learning. Marshall and Kostka defined flipped learning as "a model which inverts the traditional classroom by introducing course concepts before class, allowing educators to use class time to guide each student through active, practical, innovative applications of the course principles" (Marshall & Kostka, 2020, p. 2). Using this approach in the synchronous and asynchronous classroom is interactive and it emphasizes the teacher's role in the classroom. In the synchronous classroom, teachers can assign work to students where they take control to ask the teacher any direct questions that they have while working.

The COVID-19 pandemic has led teachers to find new ways to connect with students and transition to a new format of teaching quickly. Kaden conducted a study in which a single case study was used to examine how the coronavirus pandemic has impacted teachers. The teacher stated that previous experience using educational technology and collaborative administration were key factors in making the transition (Kaden, 2020). It was mentioned in the article how important it was for teachers to establish a routine for the students as well as provide them with timely feedback. Equity was the main focus of the lesson plans for this teacher when conducting remote teaching and connecting with his students during online classes was also important to him.

Bracho was a teacher during two major events in our country's history, one being the 2001 9/11 attacks and now today, the Coronavirus pandemic. Throughout both occurrences, there was a recognition that uplift was an essential part of a teacher's work, which included caring, empowerment, and advocacy (Bracho, 2020). Teacher professionalism was defined by moral and ethical standards in the 19th century. Now, teachers' identities are centered around standardization and testing practices. It is important to consider your students' emotional lives as teachers because teaching is not just about how we deliver lessons. A change that teachers can make to their classes is to incorporate mindfulness practices. The coronavirus pandemic has been an emotionally challenging experience for many teachers and students. We need to connect regularly with our students, take into consideration their emotions, and demonstrate that we care for them.

The COVID-19 pandemic has led to rising unemployment rates. While this is saddening for some, these unemployment rates may improve teacher quality. Teachers who enter the math profession during a weaker economy are more effective than those who enter a strong economy. During a recession, a teacher's pay is hardly ever cut. It was found that teachers who entered during a recession were more effective at raising their students' test scores than teachers who entered a career during a strong economy (West et al., 2020). Although many school districts might not even be considering hiring more teachers because of the monetary troubles that the coronavirus has caused, districts can now strengthen the workforce of their teachers, being that we entered a recession in February. Recessions are challenging for many; however school districts can look at the positive side and hire effective teachers.

Showing that we care for students can be demonstrated in many different forms, and it is especially important in the times that we are currently living in with the coronavirus pandemic. Being cared for is a fundamental human need. Teachers can show that they care for students by modeling, dialogue, practice, and confirmation (Jones, 2020). As teachers, our actions are constantly being observed by our students, therefore, if we show that we are caring, it will model for them that they should care too. Dialogue is two-way communication, and throughout the pandemic, teachers turned to their colleagues for advice and support during this uncertainty. Confirmations of teachers can encourage to their students that they are valued. Confirmation is encouragement for students because they can find goodness in them, motivating them to grow and develop. Teachers can help build character in their students by providing them with confirmations (Jones, 2020). It is crucial that during the pandemic, which has caused uncertainty for students and teachers alike, teachers focus on caring for their students and one another.

The findings of the study done by Park and Kim show that an interactive communication tool can help promote interactions between teachers and students (Park & Kim, 2020). Teachers are encouraged to use interactive tools to support student engagement. It has been shown that an advantage of computers is that there is an increase in student engagement. Looking at education through a constructivist perspective, teachers are recommended to create student-focused, collaborative environments because students learn best when participating. For students to be able to participate in effective interactions, there needs to be effective communication. The teachers' most important role during remote learning is to build their presence in the content, discussion, and activities they create (Park & Kim, 2020). There is a positive association between student satisfaction and teacher-student interaction. There is a direct relationship between a student's sense of teacher-presence during remote learning and student engagement in the material.

Teachers have been supportive of remote learning because education was still able to be conducted in a scheduled format. A benefit of remote learning is that it has flexible learning environments. There are many advantages to remote learning, including, sustainability of education, it provides lifelong learning, and the reduction of education costs (Hebebci et al., 2020). Remote learning offers shorter lessons and activities done outside of the classroom. Teachers can use remote learning as a time where they work on improving themselves and their teaching practices to incorporate more educational technologies.

Teachers who worked during remote learning appreciated effective communication from their administration. Teachers value student connections; thus, many of them tried to provide support to their students, especially at the beginning of the pandemic (Martinez & Broemmel, 2020). Many teachers had positive views on their self-efficacy due to the pandemic. It is important to recognize that teachers are committed to their profession and their students, and this crisis has even made some more committed.

Many teachers have turned to using social media to aid in the transition to remote teaching and learning. The social media site that was most frequently used was Twitter, and the two most popular hashtags were #RemoteTeaching and #RemoteLearning. Hashtags and Twitter were used to meet teachers' social, cognitive, and affective needs. Trust et al. discussed the benefits of using social media during unprecedented times. According to research, social media has been

shown to enable timely and situated learning for teachers (Trust et al., 2020). Through these hashtags, 36,788 tweets were made, and the final set for this study included 10,444. Most of the tweets were neutral or positive, and they focused on posting resources, using technology for teaching and remote learning, as well as specific advice on using different technologies, including Zoom, Google Meets, and more (Trust et al., 2020). Teachers used Twitter as a means of expressing encouragement for other teachers and sharing their experiences to help those reading. The results of this study showed that Twitter was used to support the transition to remote learning since teachers had to change their approach to teaching.

Ferri et al. (2020) discussed both the opportunities and the challenges that came about from the coronavirus. Remote learning is important in education because it still provides interaction, although it may not be done in person. While remote learning is not ideal for many, it has allowed individuals to teach and learn without an interruption to education (Ferri et al., 2020). Remote learning has created new opportunities as well as the ability to reflect on what is working within your educational system. It is important that through your remote learning environment, you build a sense of community and have interactive lessons that are engaging for students but also allow them to learn about their classmates and work with them. A positive of remote learning is that it can be used to complement face-to-face lessons.

While the two special education teachers included in these author's research do not favor remote learning, they believe that there is hope for it, as there is increased communication between teachers and parents (Schuck & Lambert, 2020). Remote learning, in general, can be beneficial to students, however the researchers are unaware of the extent of those benefits regarding remote learning with the coronavirus pandemic. These general benefits include having direct access to course materials and appreciating the flexibility in the online classroom.

Christensen and Alexander (2020) discussed how a school leadership team decided in 2006 that they would implement one Distance Learning Day a year to be prepared if a pandemic causes school buildings to be closed long term. A school can prepare for this by having teachers undergo professional development on technology tools. A decade ago, and still now, technology is an essential part of education, especially when the buildings are closed (Christensen & Alexander, 2020). When teachers were creating their lesson plans for the Distance Learning Day, they also incorporated activities that did not need to be done online, and they gave their students guidelines and expectations about the assignment. For a Distance Learning Day to be successful, teachers, students, and parents must be prepared. The benefits teachers reported about the Distance Learning Day included student autonomy, problem-solving and improved technology skills. Most of the teachers also reported that they were prepared, and teachers were more successful if they did not think that it was just another task that they had to do. A Distance Learning Day allows for self-directed learning, improved problem-solving skills, and increased communication with students and teachers. When teachers prepare these lessons, they determine what tools and resources are needed to teach remotely (Christensen & Alexander, 2020). When there is early planning, the confidence of the teachers rises.

When the switch to remote learning occurred due to the coronavirus pandemic, it was the first time teaching online for many teachers (Summers, 2020). A goal of remote learning was to find ways to create a more inclusive and equitable environment. Providing equity isn't just in terms

of physical objects, for example, computers and the internet, but it is also about creating an environment that is welcoming and supportive of all students. If teachers are trained in social emotional learning, it can help them build equity and self-efficacy to engage their students, regardless of the learning environment. Social-emotional learning is important because it helps us manage stress, become resilient, and be optimistic during uncertain times. It is helpful to know that if teachers participate in a virtual learning session, and they are disengaged, there is a good chance that their students will also be disengaged. In the next section, we will investigate the study's methodology.

Methodology

When this researcher conducted this study, they used a quantitative approach. The researcher used a survey designed to determine the effects that remote learning/teaching had on teachers due to the COVID-19 pandemic. The researcher chose to use a survey for the study because a survey allows people to remain anonymous and to feel more comfortable with giving honest answers, and it can reach more teachers. The participants in this survey include 63 teachers, with a majority of 68.3% being female, and almost all, 93.7% with a General Ed Certification. Teachers who participated in this study worked in elementary, middle, and high schools. Teacher demographics were derived from the data in the survey. Most of the respondents taught at the sixth-grade level, 27%. The results of the survey indicate that 79.4% of the respondents have greater than ten years of teaching experience.

For the sample, the researcher used a convenient/random sample group. The participants for the study were teachers, male or female, with a minimum of one year of teaching experience, and who have been teaching during this time of remote learning. This group was chosen because if they have at least one year of teaching experience, then they taught using face-to-face instruction before the pandemic and can relate to how the pandemic has impacted them and how they had to change their teaching. To ensure that a random sample group was being used, the link to the survey was posted on the researcher's Facebook account, as well as a confederate was used to distribute the survey in school buildings of the district where the researcher works.

The tentative timeline for data collection was that it took about five weeks to prepare the survey prior to its release. Once released, the survey was disseminated through the school and social media and was open for seven days before closing. The instrument that was used to collect the researcher's data was a Google Forms survey. The data was analyzed using Google Forms. Since Google Forms shows each item broken down into each individual question, it will show you the breakdown of each respondent's answers; it will be placed into pie charts and can be put into a spreadsheet for analysis. The data being analyzed revealed strategies that have worked and those that have not worked for teachers during this time of remote learning. The data analysis also provided a better understanding of the effects that COVID-19 has had on teachers and the changes that they have made to their curriculum and determine whether there are any correlations in teachers' responses.

Nasr (2020) discussed how during this time, many teachers can be compared to students in the sense that this time is new to them, along with having to learn about recent technology. Many teachers had to re-create their former lessons that were designed to be used face-to-face to be able to be used during remote learning across computers. It became a challenge for many

science and math teachers regarding how to deliver instruction remotely. The COVID-19 pandemic placed teachers in a distinct position, as students themselves, learning how to navigate online teaching. Although many teachers may not be comfortable with it, they had to use technology to help remote learning be successful. A method that a secondary science teacher used was creating self-paced modules that accommodated diverse learners (Nasr, 2020). A challenge for STEM teachers in using technology is that it is beneficial to help students learn; however, it is a disadvantage to authentic learning. The traditional classroom assessments, multiple choice and short answer, can no longer be used, rather group collaborations, video recordings, or photographs are used to assess students while learning remotely. Teachers can utilize the technologies that are popular with their students, encouraging their participation and creativity (Nasr, 2020). This time of COVID-19 is a challenge for both educators and students alike, thus creating an environment of care and humans-first, showing students that their teachers support them and will be flexible during these uncertainties. Connection and flexibility are two crucial characteristics to have in your remote learning environment. During the pandemic, teachers were students, and they learned and grew in using technology while needing to teach remotely.

The criteria used in designing this survey included 29 items to be answered using a Likert Scale. The Likert Scale was five point ratings including; Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5); Never (1), Once a Month (2), Weekly (3), Few Times a Week (4), Daily (5); Strongly Disagree (1), Disagree (2), Don't Use/Never Use (3), Agree (4), and Strongly Agree (5); No Experience (1), Slight Experience (2), Some Experience (3), Moderate Experience (4), A Great Amount of Experience (5); and Never (1), Rarely (2), Occasionally (3), Moderately (4), All the Time (5). The focus of the study was on the experiences with different technologies, strategies, and adjustments to lesson delivery. Item 7 discussed assessing student learning, which comes from both Leacock and Warrican (2020), and Nasr (2020). Item 10 discussed online learning tools, which comes from Bubb and Jones (2020), Henriksen (2020) and Marshall and Kostka (2020), and item 15 discussed technologies, which came from Dhawan (2020), Henriksen (2020) and Trust (2020). Item 11 asked about the use of Flipgrid, and that comes from Trust (2020) and Wright (2021). Item 12 mentioned how it was challenging to maintain communication and motivation, which comes from Dhawan (2020), Hebebci (2020), Konig et al. (2020), Marshall et al. (2020), Martinez and Broemmel (2021), Spoel (2020), and Ferri (2020). Item 14 discussed if teachers felt they had more time to plan their lessons, which comes from Bubb and Jones (2020), and Kim and Asbury (2020). Item 17 talked about a pedagogy of care, which comes from both Jones (2020) and Nasr (2020). Item 18 talked about differentiating instruction, which comes from Marshall et al. (2020) and Spoel (2020). Item 21 compared remote learning with face-to-face instruction, which comes from Hebebci (2020) and Marshall et al. (2020). Item 22 asked teachers if they turned to social media, which comes from Trust (2020). Item 25 talked about establishing a routine, which comes from Kaden (2020) and Schuck & Lambert (2020). Item 27 discussed social emotional learning, which comes from Bracho and Kaden (2020). Item 28 discussed setting time limits, which comes from Dhawan (2020).

For this researcher's study, the researcher used questions to determine the effects that the COVID-19 pandemic had on teachers, focusing on what strategies worked for them and how they had to change their curriculum to adjust to the new teaching environment. These items

were developed by focusing on whether the teacher's turned to social media to find support during these times, if the teachers plan to use technology in their classrooms in the future, and the lesson delivery format. In addition to these questions the researcher also asked a few demographic qualifying questions so that the data can be accurately categorized. The study was conducted anonymously by using Google Forms, in which the researcher does not have access to the participant's email addresses or any other identifying characteristics. The study was also anonymous because the link was posted on social media, allowing anyone who meets the criteria to participate, and the distribution within the schools was done by a confederate who had access to the school staff, not the researcher. The respondents only participated if they felt comfortable doing so. The frequency of responses was used as an analytic method. In the next section, we will examine the results of the study.

Results

This survey aimed to determine the effects that COVID-19 has had on teachers and what strategies they use in the classroom and the ones they do not. A total of 63 respondents participated in the survey, with 68.3% being female, 30.2% male, and 1.6% who preferred not to answer. When respondents were asked if they were new or veteran teachers, 89.9% responded that they were veterans, and 11.1% were new teachers. Most of the respondents, 79.4%, indicated that they have more than ten years of teaching experience, 9.5% have between five and nine years, 4.8% have three to five years, and 6.3% have between one and three years of experience. Figure 1a indicates the grade level taught by the respondents, with the most being sixth grade teachers. Figure 1b indicates the subject area of the respondents, with a majority responding "Other". An overwhelming majority of the teachers, 93.7%, have a general ed certification, with only 6.3% of the respondents having a special ed certification.

Figure 1a: Grade Level Taught by Respondents

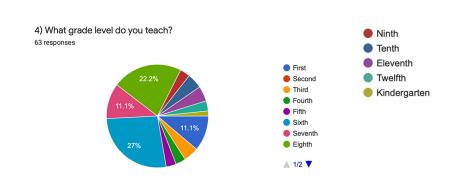


Figure 1b: Subject Area Taught by Respondent

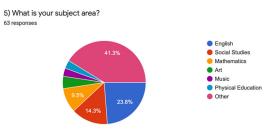


Table 1
Challenges Teachers Encountered During Remote Learning

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7	3.2%	6.3%	17.5%	41.3%	31.7%
10	0%	6.3%	28.6%	27%	38.1%
16	0%	1.6%	12.7%	33.3%	52.4%
17	0%	1.6%	11.1%	31.7%	55.6%
18	7.9%	17.5%	33.3%	25.4%	15.9%
19	58.7%	27%	7.9%	6.3%	0%

Key: Column One Represents the Item Number; Row One Represents the Likert Scale

In item seven, respondents were asked if they felt it was hard to assess student learning when engaged in remote instruction, and as shown in Table 1, there was a clear majority of teachers who agreed with that statement. Respondents were asked in item ten if they felt it was challenging to maintain communication and motivation with their students during remote learning, and a majority agreed, with some responding neutral. Most respondents agreed with item sixteen, which states that it was more challenging to differentiate instruction when doing remote teaching. Item seventeen asked if respondents felt that there was a big adjustment to their curriculum and lesson delivery, and as shown in Table 1, most teachers strongly agreed with that statement. There were mixed results for item eighteen, as some respondents slightly agreed that remote learning has had a negative impact on them that affects their teaching in the classroom, and many respondents responded neutral. Item nineteen stated that remote learning is as effective as face-to-face instruction, and as shown in Table 1, most respondents strongly disagreed with this statement.

Table 2 *Technology*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11	15.9%	12.7%	28.6%	23.8%	19%
14	47.6%	17.5%	27%	3.2%	4.8%
24	11.1%	4.8%	15.9%	25.4%	42.9%

Key: Column 1 Represents the Item Number; Row 1 Represents the Likert Scale

Respondents were asked in item eleven if they made instructional video recordings of themselves during remote learning, explaining lessons and other materials to their students. Many of the respondents agreed with this statement or were neutral. Item fourteen asked respondents to indicate if they incorporated popular student social media as a creative approach to assessment, and as shown in the table, there was a strong majority in disagreement with this statement. A strong majority of respondents indicated on item twenty-four that they used multiple devices in their online meetings during remote learning.

Table 3
Feelings on Essential Remote Learning Elements

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12	14.3%	34.9%	12.7%	19%	19%
15	0%	0%	7.9%	14.3%	77.8%
23	1.6%	0%	1.6%	12.7%	84.1%
25	0%	1.6%	12.7%	38.1%	47.6%

Key: Column 1 Represents the Item Number; Row 1 Represents the Likert Scale

Item twelve asked respondents if they felt that they had more time to plan their lessons while preparing for remote learning at home, and there was not a clear majority. A strong majority of teachers felt that it was very important to have a pedagogy of care during this time of remote teaching, as shown in Table 3 for item fifteen. Respondents were asked in item twenty-three if they felt that establishing a routine is critical for student's success in remote learning, and there was a clear majority strongly agreeing to this statement. For item twenty-five, most respondents agreed that you should focus on your students' social emotional learning at the beginning of your online class meeting.

Figure 2: Online Learning Tools

8) Please indicate, to what degree, if at all, you used the following online learning tools

60 Never Once a Month Weekly Few Times a Week Daily

20 20

Figure 2 indicates to what degree respondents used the online learning tools. As shown, a strong majority of respondents never used Peardeck, and more than half of respondents used the Chat Functions during their online meetings.

Figure 3: Flipgrid Usage

9) I used Flipgrid during remote learning 63 responses

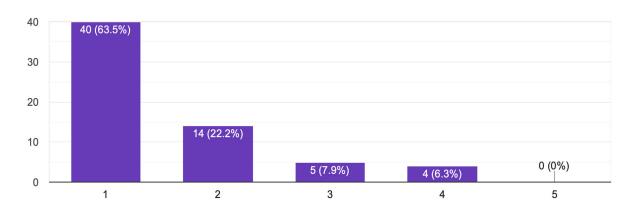
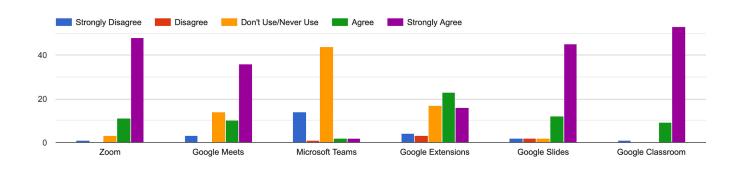


Figure 3 shows the extent of the usage of Flipgrid during remote learning. As shown, a strong majority disagreed with using Flipgrid in their remote classrooms with their students.

Figure 4 shows teachers responses as to whether they agree or disagree with whether they became better with different technologies. Forty-eight respondents indicated that they strongly agreed that they have become better with Zoom, while forty-four indicated that they never used or don't use Microsoft Teams.

Figure 4: Technologies Use

13) I have become better with the following different technologies



21) I had prior experience with online teaching before the coronavirus pandemic 63 responses

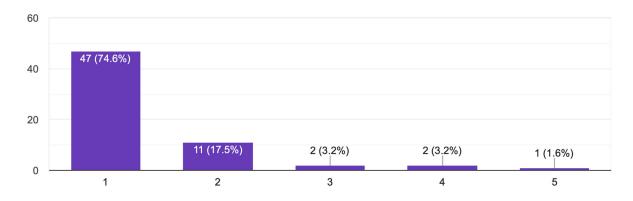


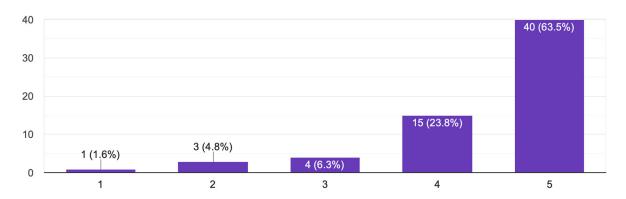
Figure 5: Experience with Online Teaching

Teachers were asked to respond as to whether they had prior experience with online teaching before the coronavirus pandemic. A strong majority, 74.6% of respondents, indicated they had no experience with online teaching before the pandemic.

Figure 6: Time Limits and Reminders Throughout Lessons

26) During remote learning, I gave my students time limits throughout a lesson as well as reminders for assignments that are due

63 responses



Respondents were asked if they gave their students time limits throughout a lesson as well as reminders of assignments that were due. As shown in Figure 6, most respondents agree that they provided their students with these time limits and reminders to help make them aware of what was expected.

27) I plan to incorporate technology more in my future lessons 63 responses

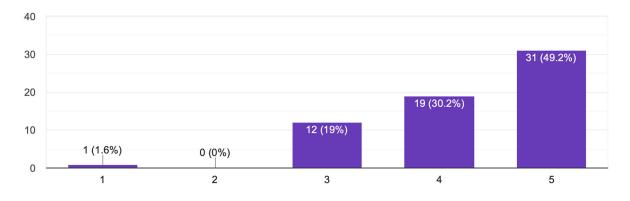


Figure 7: Post-Pandemic Outlook

Remote learning has been a prominent part of many teachers' careers during the past year. Since many teachers were tasked with having to switch all their lessons to an online format in a brief period of time, the researcher wanted to gather data on whether or not teachers would incorporate technology into their future lessons. As shown in Figure 7, most teachers responded that they agree and will plan to use technology more in their lessons. In the following section, the conclusions from the research study will be discussed.

Conclusions

At the conclusion of this survey, online tools and technologies that teachers found helpful and not helpful were indicated. An important finding in this study was to what degree teachers used online learning tools. Teachers reported using Chat Functions daily, while never using *Padlet*, *Peardeck*, or *Edpuzzle*. Contrary to the researcher's thought, many teachers did not use *Kahoot* as frequently as was hypothesized. The researcher hypothesized that many teachers would have indicated that they used *Kahoot* daily because it is a fun, engaging, and interactive assessment form to involve students in the lesson. Only one respondent indicated that they used Kahoot daily. The Breakout Rooms learning tool was evenly distributed in terms of responses, which was a surprise to the researcher, who thought that they would have been used more in order to foster collaboration and communication amongst the students in the remote learning environment.

Another significant finding of this study was item nine which asked if teachers used *Flipgrid* during remote learning. Most respondents strongly disagreed with this statement, which countered what the researcher thought. The researcher predicted that more teachers would use *Flipgrid*, as it is becoming a more popular online resource that teachers use. *Flipgrid*, allows students to record videos of themselves answering a question, and it can help to build community in your virtual classroom by having the students watch and comment on the videos of their classmates.

Item thirteen produced a significant finding of this survey. Based on the study's results as shown in Figure 4, most respondents, 48, indicated that they have become better with Zoom, and most respondents indicated that they have become better with Google Slides and Google Classroom, 45 and 53 respondents, respectively. This shows that teachers know how to use these effectively as teaching tools, while other tools, like Microsoft Teams, are not as beneficial.

Item fourteen was a significant finding and has implications for this research. Many teachers disagreed with the statement that they incorporated popular student social media as a creative approach to assessment. Because social media is so familiar to many students; the researcher thought that during the times of uncertainty that we faced, the teachers would want to incorporate a form of assessment that is the most familiar and that students are comfortable with. The implications of the responses to this item are that incorporating student social media is not recommended and not good practice to use as an approach to assessing students during remote learning.

Item eighteen had mixed results of respondents. Some respondents indicated a slight agreement, while many others responded as neutral. Despite the hypothesized outcome, which was that most teachers would indicate that they agreed or strongly agreed with the statement, in fact, the respondents indicated a neutral view in general, thus having no majority. A noteworthy item of this survey was item twenty-one. This is significant because it underscores what was thought by the researcher, that most respondents would not have prior experience with online teaching before having to teach during remote learning.

Item twenty-five has significant implications. The results from this question show how important it is for teachers to incorporate an activity or do-now question that focuses on their students' social emotional learning to help get them centered. Focusing on a student's social emotional learning is important for teachers to include because it shows that we are there to support our students during these unprecedented times when they may feel anxious and nervous about the uncertainties of the situation.

The first limitation of this study is that the participant sample did not include whether the teachers taught in a private or public school, as well as the location of their school, urban, suburban, or rural. This data could have helped to determine if the same tools were used across different types of schools and communities or if there would be a strong difference between community location and tools. Another limitation of the study was that when asked about the subject area that the respondents taught, the option of "Other" did not give them the ability to type a response. If teachers were able to type their subject area if it were not included, it would have given the researcher the opportunity to examine the subject area with the tools and technologies that were used or not used. A third limitation of this study is that the respondents are limited to the schools that the confederate distributed the survey to. If sent to the whole district rather than select schools, the researcher could have reached a wider audience.

Recommendations for future research include determining whether the implications of remote learning now will still be in effect in later years. The research can examine if teachers are still using online tools, such as *Google*, or *Zoom*, and if they had the option, would they want to continue doing remote learning or face-to-face instruction? A future study can also be designed in a way where some participants were interviewed to gather firsthand experiences in relation to the questions being asked that you otherwise might not get from just the survey questions.

Remote learning was a new experience that teachers and students had to adapt to. Teachers were tasked with having to re-create all their face-to-face lessons to online lessons. There are different tools and technologies that teachers can use, and some that are used most frequently by teachers as shown in the results from this study, are Zoom, Chat Functions, Google Meets, Google Slides, and Google Classroom. Most respondents strongly disagree with the statement that remote learning is as effective as face-to-face instruction, however, a majority also indicate that they strongly agree that they plan to incorporate more technology in their future lessons.

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If you would like a copy of the survey, you can reach out to me via email at marissacordaro14@gmail.com.

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