

## RESEARCH

# COVID-19's Impact on the Education of Students with Disabilities: Multiple Perspectives on the "Weird Normal"

Journal of the American Academy  
of Special Education Professionals  
2026, Vol. 21(2) 47 - 62  
© JAASEP 2026  
DOI: 10.64546/jaasep.642



Marcia L. Montague<sup>1\*</sup>, Elizabeth Ducey<sup>2</sup>, Sungyoon Lee<sup>3</sup>, Kayla Sweet<sup>4</sup>, Patricia S. Lynch<sup>1</sup>, Isabella Miracle Smith<sup>1</sup>, Arroya S. Beard, Laura M. Stough<sup>1</sup>

<sup>1</sup>*Department of Educational Psychology, Texas A&M University*

<sup>2</sup>*Department of Special Education, Sonoma State University*

<sup>3</sup>*Department of Elementary and Special Education, Middle Tennessee State University*

<sup>4</sup>*Chappa Middle School*

\*Correspondence:  
[mmontague@tamu.edu](mailto:mmontague@tamu.edu)

## Abstract

This paper explores the disproportionate impact of school closures and remote learning on students with disabilities during the COVID-19 pandemic. Multiple narratives, including those of a student with a disability, a parent, a special education teacher, a student teacher, teacher educators, and disability researchers, illustrate how the pandemic disrupted the special education system. The paper delves into how the experiences of learners and teachers intersected, revealing how the pandemic complicated and interfered with the shared goal of educating students with disabilities. Using Bronfenbrenner's ecological systems theory and critical disability theory, the authors synthesize these perspectives to demonstrate the ripple effect of the pandemic across various educational systems—from classrooms to higher education to educational research. These narratives reflect diverse experiences across different states, towns, school districts, and universities, collectively highlighting the significant and disproportionate challenges faced by students with disabilities during this period.

**Keywords:** barriers, disabilities, disproportionality, education, pandemics, special education

In late December 2019, the World Health Organization identified COVID-19 in China (World Health Organization, 2020). By January 21, 2020, the virus had entered the United States and reached pandemic status in March of 2020 (World Health Organization, 2020). By December 2021, there were over 271 million cases worldwide, with over 5 million deaths (World Health Organization, 2021). In the United States specifically, over 50 million cases and 800,000 deaths were reported (World Health Organization, 2021). Following the beginning of the pandemic, the impacts of the virus continued to wax and wane throughout the United States, with the end of the federal COVID-19 public health emergency declaration released in May 2023 (CDC, 2023).

SARS-CoV-2 (COVID-19) was a fast-spreading airborne virus that produces illness ranging from asymptomatic, mild symptoms, to death. The virus is life threatening, especially for those with underlying medical conditions (e.g., asthma, obesity). As the Delta variant of COVID-19 swept across the U.S. during 2021, hospitalization among unvaccinated youth under 18 increased (Federal Emergency Management Agency [FEMA], September 2021). However, a September 2021 poll indicated that over 20% of Americans will not vaccinate (Saad, 2021). Students with certain disabilities, including congenital heart disease, metabolic conditions, sickle cell disease, and asthma can be at increased risk of severe illness from COVID-19 (Centers for Disease Control and Prevention, 2021). Further, children and youth with Intellectual and Developmental Disabilities (IDD) have higher rates of comorbidities and experience higher COVID-19 fatality rates (Turk et al., 2020).

The impact on education has been widespread; educators, school attendance, instructional time, and educational best practices have all been negatively affected (Office for Civil Rights, 2021). These impacts have disproportionately affected students from socially vulnerable communities. Students who live in rural areas (Jameson et al., 2020); live in poverty (Office for Civil Rights, 2021); have limited access to the internet (Jameson et al., 2020); are Black, Native American, or Latino (Running Bear et al., 2021); English language learners (Office for Civil Rights, 2021); and those with disabilities (Mann et al., 2021) have experienced some of the most negative effects.

In typical years, students undergo learning losses during the summer months (Atteberry & McEachin, 2016); however, the pandemic created additional declines, commonly referred to as the “COVID slide” (Kuhfeld et al., 2020). In 2020, researchers estimated students in the fall of 2020 would have retained only 70% of previously learned materials in reading and 50% in math (Kuhfeld et al., 2020). A 2021 study of students in The Netherlands found learning losses were up to 60% larger among students from less-educated families (Engzell et al., 2021). Research continues to emerge, documenting the

educational impact of the COVID-19 pandemic and the disproportionate impacts on students of color, those from lower socio-economic backgrounds (Kee et al., 2023), and those with multiple marginalized identities, including students with disabilities (Dvorsky et al., 2023).

The COVID-19 pandemic has also affected student social skills as communication has taken place behind facemasks and socialization occurred online. This issue is particularly pertinent for students with disabilities. Martínez-González et al. (2021) found students with Autism Spectrum Disorder (ASD) displayed increased hyperactivity, irritability, anxiety, and impulsivity while confined during the pandemic. Adolescents and young adults with Attention-Deficit Hyperactivity Disorder (ADHD) reported increased social isolation and disengagement with school (Sibley et al., 2021). Parents reported children with autism exhibited regression in skills and difficulty connecting with others over Zoom (Tokatly Latzer et al., 2021).

During the 2020-2021 school year, students were educated using new instructional modalities including remote instruction and online instruction. Such shifts continued to impact students during the 2021-2022 school year. These changes have been challenging for all students, but particularly for students with disabilities. Online technology can create additional accessibility barriers for individuals with disabilities (Ellis & Kent, 2011). Studies on remote learning during the pandemic have reported learning disparities experienced by students with disabilities (Averett, 2021). Multiple accounts document the disproportionate impact school closures and remote learning during the pandemic have had on students with disabilities (see Mann et al., 2021). Research suggests some students with disabilities have lost previously acquired academic and behavioral skills (see Engzell et al., 2021; Tokatly Latzer et al., 2021).

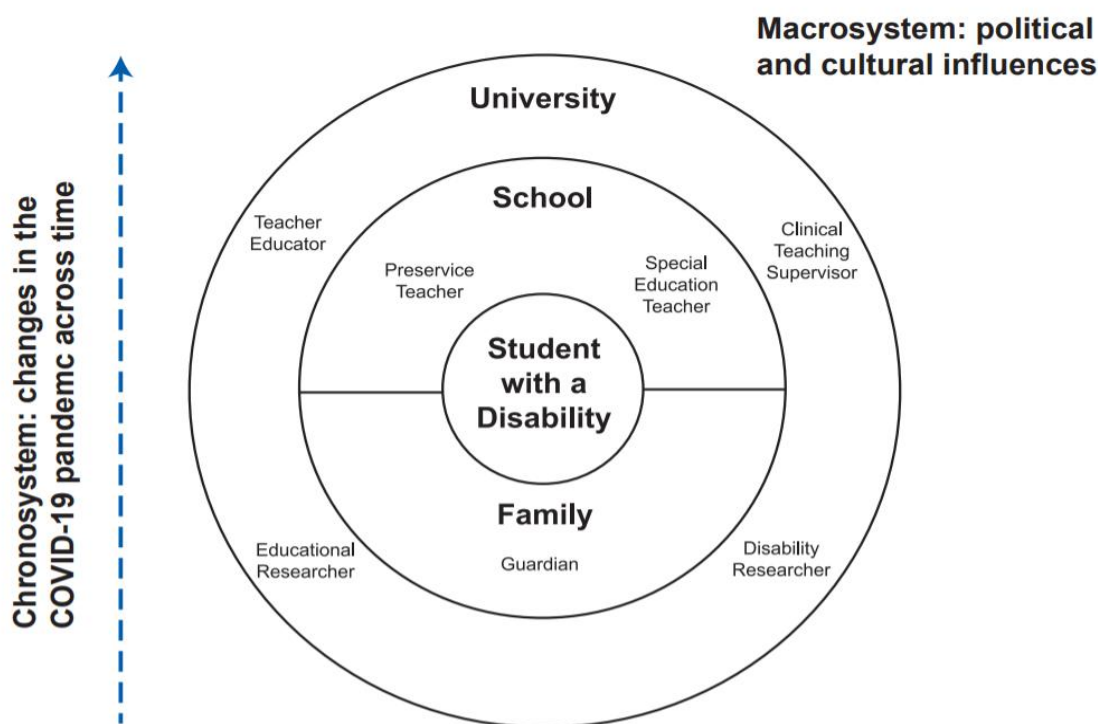
### **Bronfenbrenner’s Ecological Systems Theory**

In this paper, we adopt ecological systems theory (Bronfenbrenner, 1976) to frame our perspectives on the education of students with disabilities during the COVID-19 pandemic. Bronfenbrenner’s theory has been used previously by disaster researchers to discuss disaster impact and resilience across systems (see Boon et al.,

2012; Phillips, 2015). Ecological systems theory views human development and learning as influenced by multiple layers of surroundings (Tissington, 2008). The theory conceptualizes a nested arrangement of contexts including a microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The systems are concentric, indicating different layers ranging from the most immediate to the most distant environments surrounding the microsystem. The final component of the system, the chronosystem, represents changes across time that affect the other

systems, such as historical events or societal transitions. Figure 1 organizes our individual narratives representing the different levels of the educational environment that surround students with disabilities (i.e., the microsystem [learning environment], mesosystem [where members from different microsystems interact with each other], and exosystem [teacher training and educational research]. The macrosystem [politics, social, and cultural that influence society] and chronosystem [the pandemic milieu] surround these educational systems).

**Figure 1**  
*COVID-19 Context*



*Note.* Educational systems during the COVID-19 pandemic represented by narratives in this paper.

Our voices represent a child, teacher, parent, student teacher, teacher trainers, and an educational researcher who explore different layers of educational systems environments surrounding students with disabilities. Special education requires collaborative support from multiple people connected to students with disabilities and from multiple educational systems that influence special education. We realized that, together, we could share both emic perspectives (through writing our own lived

experiences as students and educators) and etic perspectives (through theorizing and conceptualizing about different levels of the disrupted educational system) of how the education of students with disabilities was affected- and may be affected in years to come. Our piece is rooted in experiential knowledge we gained as students, parents, and educators from March 2020 through December 2021 during the pandemic, while simultaneously participating in multiple educational systems surrounding students with

disabilities. Bronfenbrenner's ecological systems theory (1976) synthesizes the multiple voices, and we discuss them through the lens of critical disability theory (Devlin & Pothier, 2006).

### Critical Disability Theory

Critical disability theory conceptualizes disability as a social, cultural, and political phenomenon rather than viewing disability as illness or an attribute with its origin in the individual themselves (Shakespeare, 2006). We view disability as an educational phenomenon in that students with disabilities encounter barriers to education affecting their inclusion, integration, and equitable participation in schooling. These barriers hamper student learning and achievement, often similar to ways in which, for example, students of color are marginalized by educational structures. Further, critical disability theory presupposes that individuals labeled "disabled" share similar oppressions with other devalued persons (Abberley, 1987; Oliver, 1986). Critical examinations of the education of students with disabilities are essential, not only given the pandemic context, but because students with disabilities tend to be disproportionately poor (Houtrow et al., 2014), of color (NCES, 2020), and less likely to graduate from high school and to enter college (NCES, 2020). As such, many of the events of 2020 and 2021, including unemployment, the digital divide, and barriers to health care, have disproportionately affected children and youth with disabilities (Mann et al., 2021). In our view, not only was the education of students with disabilities disproportionately affected by the pandemic, *the educational systems surrounding students with disabilities were disproportionately affected.*

### Legal Responsibilities and Special Education

The Individuals with Disabilities Education Act (IDEA) requires that students with disabilities receive access to a free, appropriate, public education in the least restrictive environment possible (2004). Further, the *Endrew F. v. Douglas County School District* Supreme Court decision requires that school districts provide more than merely de minimis educational benefits; that is, students must be provided with instruction that targets challenging objectives (2017). These legal mandates remained in place during the

COVID-19 pandemic (OSERS, 2021), obligating public schools to pivot and adapt how students were educated while also complying with educational law. Despite these legal mandates, educational services for students with disabilities were interrupted during COVID-19 (Averett, 2021). Continuity of specialized service delivery (i.e., speech therapy, occupational therapy, counseling) was disrupted for many students during school closures (McFayden et al., 2021). The negative impacts of the pandemic on students' educational progress are increasingly apparent (Kuhfeld & Tarasawa, 2020).

### Special Education Practices

Special education practices support children who do not learn as effectively through conventional instructional techniques. Individualized instructional design, strategies to change student behavior, and specialized teacher training are part of special education best practices (Sayeski et al., 2019). Student-teacher ratios are lowered to provide more individualized attention, and instruction is delivered within closer physical proximity. Physical proximity allows teachers to offer quick reinforcement, as well as physical guidance when needed. Proximity also increases student engagement and allows for better teacher monitoring of student behavior (Bertills et al., 2019). However, social distancing practices and virtual instruction during the COVID-19 pandemic restricted physical proximity between teacher and student (Becker et al., 2020), thus preventing implementation of these instructional strategies.

### Multiple Voices

In the sections that follow, voices from eight different individuals reflect on the effect of the pandemic on the education of students with disabilities. These first-person narratives reflect our educational experiences within the different systems that serve students with disabilities, as well as our experiences from different states, towns, school districts, and universities.

***Perspective of a Child with a Disability.*** From the perspective of a child with an invisible disability, there are already enough struggles and worries about school. But during COVID-19, the things that may be hard for a student with a disability that has trouble with school and with being social can be even more petrifying and stressful.

"When I first started school, I was excited and scared and I was pretty lost-- but at the same time very eager to start a new school year and do something different. I had heard about online office hours for teachers and was excited to go. When I began Schoology (my school's online learning system) it was hard, so I went to online office hours. My teachers were good at helping, and if I needed help outside of office hours, I could always email them. But they just couldn't respond to me immediately, and they couldn't give me the kind of help they gave me in in-person school. So I had to adapt to the kind of help they could give me and that made online school a little easier. Then there was also the struggle of keeping up with school work and just getting familiar with the new ways teachers had us doing our assignments. For example, instead of paper assignments, we were given slideshows to work on to do our work. It took me about a week and a half to adjust. But I can imagine it took other kids longer.

Also, this was a big one - typing. When I first started the school year, I and pretty much all of the other kids pecked at the keyboard. We were very slow typers. The year before, during in-person school, we used the computer a lot but we didn't type every day all day long. So in the spring of 2020, when we first started doing online school my Aunt, Dr. Marcia Montague had me practice on a bunch of different typing practice websites. In my free time, I did a lot of typing on those websites during the end of that school year. Well, I have to say that summer was a nice long one, but then the next school year started, and (honestly, I don't even know when this happened) somewhere near the beginning of the school year, all of a sudden, one day instead of pecking at the keyboard like a hungry chicken, I was using six fingers to type. Sure that isn't all 10 of them, but I was typing so much faster!!! Let me tell you, being able to type more quickly made my online school life sooo much easier.

Then there was another problem...grades. It became a constant struggle for me as a student to try to keep my school grades up. It wasn't like I was making thirties in my classes, but my grades dropped from ninety to seventies. Not only that, I was often also missing

assignments, mostly in social studies and science. I would then end up finishing school work later in the afternoon when my aunt would look at my grades. I would end up having to work on the missing assignments sometimes for hours. Both my aunt and I were getting rather annoyed at me- I was even getting annoyed at myself. Later in the year, I stopped having so many missing assignments, and my grades did improve, and I was able to keep them up.

Testing online at home is definitely different from doing them in-person. Instead of doing a paper test, we use a website where teachers post the tests. This was new to me, but I soon caught on. Second, instead of writing our work on a paper test, we had to get our own paper, take a picture of it, and then send it to our teacher through email. That was strange, and some kids found it rather annoying. I didn't mind it much, though. Third, if we have a question during the online test, we can't just simply raise our hand, and after a moment, the teacher will come help. No, we have to email the teacher the question which wasn't as easy as just being able to raise your hand but again I got used to it.

When I first started school and joined the Google meetings with other students and our teacher it was like I always was at the beginning of school-- shy. I wasn't extremely shy, but I kind of kept back. Then later, a couple of days into the online school year, a girl on Google Meets asked me about myself. Before I knew it, we were talking away. In a week, we were friends emailing each other and talking on Google Meets. Of course, it wasn't the same kind of interaction we would have had during in-person school. For example, we couldn't hug each other or play outside. But, we could talk about our weekend or start a group club. We called our group the 'Dork Squad.' Over time our little group got bigger and two more amazing people joined, and then another. Social interaction and communication are very good. They help you get through things and really let your inner self shine.

Another big thing is STRESS. I've had some really bad weeks. Sometimes I have just been trying to keep up and get it together. I do admit my cats interrupt and can be pretty annoying, but I could let my cats outside. Also, having your teachers, friends, and family being there for

you and understanding you can really help. Having family there can be reassuring too. If you are a parent I know you have definitely had your bad days and it is hard to have a child who is also stressed out and overwhelmed with so much pandemic and school stuff going on in their lives.

Through this year, I have learned so much, but I have also gone through more this year than everything I have ever gone through in school combined!!!! :) This has been a weird and exciting and stressful and happy year. But I definitely owe my thanks to my teachers, my friends, and most of all my family because they have all helped me through this strange time. Honestly, I've gotten so used to the way we live now in this pandemic and doing online school at home that this isn't even strange to me anymore--it's more of a 'weird normal.'"

***Perspective of a Guardian of a Child with a Disability.*** "I am the guardian of the pre-teen who wrote the previous excerpt. She is a 7th-grade student with a learning disability in mathematical problem solving. I am also the parent or guardian of four older children ranging in age from 16 to 23. In addition, I am a faculty member in a special education program at a large research university. I teach future and current teachers, and I supervise student teachers. While I wear these many hats, here I focus on my role as a parent.

As a parent and guardian, to the best of my ability, I support all my children to reach their full academic, social, emotional, and physical potential. My role as the guardian of Arroya requires that I communicate with school personnel, share information on what works best for my child, and advocate for needed accommodations and placements. To support my child socially and emotionally, I encourage positive friendships, discuss challenges she has with peers, and respond to struggles she has with approaching difficult interpersonal situations (including bullying and negative peer pressure). These struggles have required me to contact the school to share my child's challenges so her social-emotional needs are better met.

Our family decided our children would learn from home during the 2020-2021 school year in hopes the pandemic situation would become under control. Our house then became our school, the kitchen table became

the classroom, the computer became the teacher, and my child's siblings and I became her classmates. However, this home learning environment also provided freedom from bullying in the classroom she had experienced in prior years. No kids picked on, teased, or criticized her. She has also been freed from comparisons she would make between herself and her classmates. She previously saw how quickly other students would finish their classwork and how easily learning seemed to come to them. However, in this online environment, her pace was her pace. And, that pace was just right.

Consequently, we had no difficulties regarding how kids have been mean to her. Instead, we had many conversations about how she made new friends and communicated with them via email and Google Hangout meetings. She enjoyed interacting with her friends, laughing, joking, and encouraging them when they had challenges. As a result, she felt supported, and I did not have to help her navigate the challenging behaviors of her peers.

My 'parental work' also changed. I am now very aware of the need for high-speed Internet and technology that supports educational access. As we live in a rural area where Internet bandwidth is not optimal, especially when multiple individuals simultaneously use the same Internet connection, technology has been challenging during the pandemic. I had to provide technical support as she attempted to engage in schooling. In addition, I had to help her ask for help when a raised hand was no longer sufficient.

As she is the youngest child in our family, I anticipated that she would need more help than would her siblings. But, I also recognized this need for additional support may stem from her disability. During the first month of online learning, there were many times I needed to sit beside her so I could monitor her work and ensure she could access the materials provided by her teachers. Although she had a steep learning curve, she ultimately became much more independent, and my time as tech support and teacher dramatically decreased.

I know that my experience as a parent has been just that - my experience. I also acknowledge that my

perspective is informed as an educator. I suspect this gives me a fuller view of what Arroya has learned and experienced. The pandemic disruption revealed both positive and negative impacts. In particular, I have witnessed the adaptability of my child- and this skill will not leave her once the pandemic ends. I have also seen her take responsibility for her school day when no one is monitoring her. I have seen her organize her schedule in a way that makes the best sense for her. These changes have let me see that she will be a self-directed and self-reliant learner, as well as a self-advocate throughout her life. She now knows how to be an independent learner, and I believe she will use that self-knowledge throughout the remainder of her educational journey.”

***Perspective of a Special Education Teacher.*** “I am a special education teacher for 6th to 8th grade students with various disabilities such as autism, ADHD, specific learning disabilities, cognitive disabilities, and developmental disabilities. On a typical day, I teach students in my own classroom as a resource teacher but also in other teachers' classrooms as a special education co-teacher. As a special education teacher, I modify lessons, work with small groups of students, and work one-on-one with students based upon their individual learning needs. Student instructional needs range from needing help with reading text to needing reminders to stay on task. I am also a parent with a child who is diagnosed with dyslexia. As both a teacher and a parent, I found it a challenge to help my own children during the transition to remote learning during the pandemic. Often I wondered how parents managed who were not educators within the district. I figured, if I was confused and lost as a teacher, other parents certainly had to be too.

We heard of COVID around February 2020, but we didn't think it would affect our community, so no need to worry. Spring break was coming, and there were rumors we may not come back to school right away, but no one knew for sure. About two hours before the bell rang for Spring Break vacation, chaos broke loose. We teachers were told to print and send home anything we could with students in case we did not come back for a few weeks. Then the halls emptied and all of us departed. The school

was left hollow- an emptiness that would remain until late September, 2020.

Once the school board decided we were not going back to school in person after Spring Break, teachers rushed to figure out how to get devices to students, internet to homes that did not have it, and posting instructional material on an online learning management system that had not been utilized much before. The rest of the year was ever-changing; phone calls to check on students, and many more hours planning. We all moved and learned quickly; everything seemed a blur. Our main objectives were to make sure our students knew that we, their teachers, were there for them, to engage with them in social-emotional conversations, and give lots of grace to our students, colleagues, as well as to ourselves. However, I did not know what my students were experiencing unless they mentioned it. I knew my students could be walking through the battle of COVID, the loss of a loved one, or the loss of a parent's job. I did know, however, that my students lost the sense of a school routine, a place to have breakfast and lunch, and their connections with other students and teachers. The structure of school had changed substantially.

As a special education teacher teaching students online, I had to ensure my students had access to online devices, access to audio recordings and videos for assignments. Much of my time was spent recording audio for students who needed text-to-speech. One barrier that occurred was students simply stopped attending class online. Some students may have been confused with using the online platform, or not want to talk through Zoom. The online learning environment was a complete change and this was a struggle for them. Students went from learning in a physical classroom with teacher monitoring to being accountable for all parts of their schoolwork- even attending class. It took time for parents and educators to realize the new LMS did not work well for all students. Difficulties my child, who needed speech-to-text modifications, experienced with the LMS became a driving force for me as a teacher to make sure my own students had their needed accommodations.

Overall, this year has been like no other year in

our lifetimes. The effects of the pandemic on students with disabilities are still unknown. Some students have struggled during this time, while others have demonstrated resilience. However, some positive effects have been students who have learned better time management, become more tech-savvy, and learned to be creative problem-solvers. It is one year since the beginning of COVID in our state, and educators are now being vaccinated. This last year has allowed parents, grandparents, relatives, and others to see the importance of teaching. Many parents also had to be teachers for several months, and many now realize the challenges educators face every day. As a result, I believe a greater appreciation for the teaching profession has arisen."

***Perspective of a Preservice Student Teacher.***

"As a college student during 2020, I completed my student teacher training between August 2020 through late November 2020. During this time, I spent everyday teaching in a high school special education classroom. This training required me to step into the high school teacher role, including instructing students all day. I will make a simple statement: My training was severely impacted by the pandemic.

Preservice teachers in high school special education settings, before the pandemic, completed their teaching in a physical classroom. They taught during all allocated class periods; conducted tutorials before school, after school and during lunch; and utilized teacher workrooms, teams, and other resources to prepare for their lessons. The experience for me and other preservice teachers completing their student teaching during the COVID-19 pandemic was very abnormal. Some preservice teachers conducted their student teaching entirely face-to-face, with social distancing, mask mandates and requirements set forth by the school, district, and the State of Texas. Some preservice teachers conducted their student teaching in its entirety in a virtual classroom. I completed most of my student teaching training working with students face-to-face, but also taught some students in a virtual classroom. These pandemic-related challenges also constricted preservice teachers from gaining experience completing many "normal" tasks that teachers

are expected to fulfill. Thus, their training lacked the experiences needed to teach and lead in a traditional classroom setting.

Many tasks which we did experience were hindered by barriers and requirements in response to the pandemic. For example, developing rapport with students was hindered greatly. While I was still able to develop a relationship with in-person students, they never got to see the majority of my face, they never got to see my encouraging smile, they never knew what I looked like without 6-feet of distance between us. Similarly, I never got to see the faces of many of my students. While my rapport-building with students was hindered, my rapport-building with their parents and caregivers was completely non-existent. Due to the pandemic, my mentor teacher struggled to successfully contact parents of special education students. She worried that if I, who had never worked with these parents before, called parents instead of her, it might create more communication barriers- so my mentor teacher handled all parent contact. Also, I never got to experience becoming a part of the school community, as many school functions were virtual or nonexistent. I never got to attend a traditional Individualized Education Plan meeting.

Due to COVID-19, many teachers were forced to teach virtually, but had received very limited training on how to be successful in virtual teaching. As a Gen Z and being 22 years-old at the time of my student teaching training, technology was something I was quite comfortable with. Not many traditional teachers-in-training get to instruct veteran teachers on how to be more effective, but I did! I also was able to work together with a general educator and my mentor teacher to determine how to provide accommodations to our virtual students with disabilities. I got to see how the pandemic compelled teachers to come together and work side-by-side, and it was the first time I got to see a glimpse of the way teaching collaborations were meant to be.

Unfortunately, there were significantly large gaps in my training as a preservice special education teacher due to the pandemic. These gaps represent mistakes I will make as a new teacher, mistakes I will make in teaching

my future students, and mistakes I will make in building rapport with coworkers, students, and parents. These gaps also represent the lessons I will need to learn after I am already fully responsible for my own classroom and my own students. While I can only report on the disruption that COVID-19 had on my own training as a preservice teacher, there were gaps in the training of the tens of thousands of other preservice special education teachers during COVID-19. I believe these gaps will have a significant impact on the students with disabilities we teach in the future.

### ***Perspective of a Student Teaching Supervisor.***

“As a student teaching supervisor, I am responsible for observing college students teach in special education classrooms and giving them feedback. Typically, they submit their lesson plans to me ahead of a teaching observation and I give them suggestions regarding content and ensure they include key components such as modifications and accommodations, higher order questions, and student engagement. I observe them teaching a total of four lessons and conduct midterm and final evaluations on them in collaboration with their classroom mentor teacher.

At the beginning of the pandemic, no one other than school district employees was allowed into schools. At first, not even the student teachers were allowed in the building. Eventually, student teachers were allowed to go to campuses, but other people (i.e., student teacher supervisors) were not, unless they were also employees of the district.

With limited access to schools, supervision was conducted via Zoom. At first, all instruction took place on Zoom; later some children attended school in person, while others continued to participate via Zoom. Several limitations in supervising student teaching occurred. First, teachers were not allowed to require students to turn cameras on or to unmute. Interactions might be occurring between the student teachers and students via chat, but those were not accessible to the supervisor. So, a supervisor could not always tell if students were engaged or actively judge interactions. When student teachers were instructing some students in person and some via Zoom, the supervisor could not see all classroom interaction, so

some student behaviors and some interactions between the student teacher and students were missed. As an observing supervisor, I simply could not see the ‘whole picture.’

In terms of the quality of teacher preparation, if the student teacher was very strong, they were able to compensate for these challenges—for example, the student teacher could develop good enough relationships with students so they would turn on cameras and unmute. For student teachers who needed more support, the supervisor may not have been able to see enough to provide specific supports. Insufficient feedback to student teachers meant they may not have mastered all the skills required of teachers, which in turn will impact the quality of education they will provide to their own future students. These student teachers also missed many experiences that occur in teacher training, such as dealing with multiple students in a classroom, managing behaviors, and monitoring a classroom of students as they progress through a lesson. As a supervisor, I felt unsure if I had really provided the level of support and guidance that my student teachers typically receive.”

***Perspective of a Special Education Teacher Educator.*** “I work as a faculty member in a special education teacher preparation program. My work involves teaching courses, conducting classroom observations, advising students, as well as numerous college service and research responsibilities. I am also a working mother who started a tenure track position in the midst of the evolving pandemic. My spouse, an essential worker, was required to continue working in person- leaving me primarily responsible for childcare for our two elementary-aged children. Similar to many others, I struggled with assisting children with online learning while simultaneously meeting my work responsibilities. However, I had the emotional support of my spouse and the financial means to spend a number of weekends at a hotel for uninterrupted work, which are resources other working mothers may not have.

In our teacher preparation program, we follow a research-to-practice model- so our students learn best practice in the college classroom while simultaneously observing, participating, and teaching in K-12 classrooms.

The majority of our students are on an intern pathway, meaning they complete the remainder credential program while simultaneously navigating their first year as a teacher, which is challenging for them in typical times, but became incredibly complicated when the rapid shift to online learning occurred.

Before the pandemic, I felt confident guiding my students in developing the knowledge and skills needed to support their students with disabilities. My college instruction was challenged when the University rapidly shifted to online instruction- along with the K-12 schools where my interns worked. Our interns were suddenly charged with providing instruction, accommodations, and modifications to their students online. Many of their students needed intensive instruction and hand-over-hand physical supports, which were not possible over Zoom. Interns suddenly experienced increased interactions with parents and caregivers, who wanted to tell them how best to provide instructional supports or use visual supports such as schedules. Additionally, the interns were forced to suddenly navigate the legal responsibilities of providing services online while learning what those legal responsibilities entailed in non-pandemic times.

As a university educator, my responsibility is to provide timely information on best instructional practices. I questioned how I could do this when best practices for delivering online instruction to students with disabilities was actually being figured out in real-time.

While my interns were rushing to translate to online instruction for their K-12 students, I was doing the same at the college level. I moved all of my content onto a learning management system while also learning how to manage Zoom. Taking new trainings and spending hours creating organized online platforms in the midst of a pandemic, while supporting my own student interns, was incredibly stressful and exhausting.

I am concerned about teachers trained during the pandemic who will enter classrooms without having had opportunities to apply instructional skills face-to-face. These new teachers will encounter new situations not observed or practiced in their student teaching experiences. Additionally, they will start their teaching

careers responsible for children who have experienced tremendous disruptions and who will be experiencing grief, loss, and mental health issues. These teachers will also start their new jobs in classrooms with students who are behind on skills. Given all these challenges, however, there are also some positive skills these future teachers have learned in the midst of this pandemic. For example, teachers-in-training have been virtually in students' homes like never before, providing them with insights into how home life affects student learning and communication skills. My interns, along with teachers, across the globe, demonstrated immense dedication and resiliency with the shift to online, but there does need to be continued support for them to develop skills they did not explore during their preparation."

***Perspective of a General Education Teacher Educator.*** "I am a university faculty member in a teacher education program. Although most of my students will become general elementary school teachers, knowledge and skills about instructing students with disabilities and collaborating with special education teachers are essential parts of their training. It is important that teacher candidates need to know how to create an inclusive classroom where all students feel safe and receive effective instruction.

I am also a parent of a six-year-old boy who just started his education as an elementary student. Working in different universities, which are not located within commuting distance from each other, my spouse and I have experienced numerous difficulties with childcare. I teach several courses that prepare preservice teachers to be elementary school teachers. Much of my work involves teaching education courses that focus on elementary instruction and classroom management skills. I also teach a diversity training course and a technology application course. In all courses, creating instructions for children with disabilities has been an important issue. We discuss how we can support them by creating an inclusive classroom and by using educational technology applications. These courses include students' field observation as part of their requirements. When their field placement is assigned, my students visit the schools to observe their mentor teachers'

teaching and classroom management. Then, in class, we discuss what students observe in these classrooms and reflect on mentor teachers' classroom management, teaching, teacher-student relationships. In my courses, how to work with students with disabilities and special education personnel is an important topic that students and I often discuss.

When the schools went online in 2020, it became difficult to arrange field placements for my students. In fall 2020, I learned that many schools decided to accept only a limited number of students due to COVID-19. Even after being assigned, students' observations were still disrupted by school closures, absences, practicing social distance, and quarantines. Many classrooms were delivered in hybrid format where only a few elementary students were present in the classroom. The disruptions in their field work also affects our reflective activities in the college classroom. For example, when we talked about teachers' interactions with children with disabilities, many of my college students simply did not have any observations about it.

The limited opportunities for in-class observation significantly affected my college students' learning of how to teach special education students. It is essential that teacher candidates observe and can model effective interactions between their mentor teachers, students with disabilities, and special education teachers. Though we can discuss these elements in the college classroom, practical knowledge and skills for teaching students with disabilities are best obtained through real-world elementary classroom experiences."

### ***Perspective of a Disability Researcher.***

"Throughout my research career, I have investigated the educational, psychological, and social inequalities experienced by people with disabilities. I also teach and advise graduate students, and much of each week is spent mentoring and interacting with them. During the first year of the pandemic, faculty researchers like myself taught remotely and interacted with students and fellow researchers virtually. I also experienced the difficulties of working from home in which time at home and time at work became blurred and the number of hours off the computer were few. My house in Texas became the work station for

not only me, but also for my husband and, when New York City was at the height of the outbreak, for my daughter who returned from her college dorm after one of her fellow university students died from COVID-19.

My research primarily employs qualitative methods. Epistemologically, I see knowledge as produced from multiple sources--so the voices of the disability community and of my students at the university are important mediums through which I gain knowledge that informs my work. However, best practices in qualitative data collection involve close proximity between researcher and participants--whether in terms of physical space, ensuring clear communication, decreasing power differentials, or the intimacy inherent in interview and observational techniques.

The circumstances of COVID-19, particularly social distancing, inhibited many forms of qualitative data collection including interviews, focus groups, and participant-observation techniques. At first, I perceived these changes to be "a pause" in obtaining new data--that I would return to my previous ways of interacting with participants and collecting data. However, as the pandemic continued beyond several months, I realized that my students and I had to abandon these best practices in conducting research. Thus, I became research-distanced as well as socially-distanced from potential research participants. Doctoral students I supervised were similarly affected--they had to resubmit research proposals, revise their dissertation study designs, and settle for interviewing participants through Zoom, Skype, or Microsoft Teams. Much communicational information can be missed when a researcher is not in the same physical space with their participants. Nonverbal cues and body language are particularly important when interviewing and observing people with disabilities who may communicate or gesture in ways that are atypical. The data that we gather and our interpretation of it simply are not as informative or refined through distance technologies. Dissatisfaction with these limitations prevented me from initiating new studies and applying for research grants--and I know other disability researchers have been similarly impacted. These barriers affect graduate students too, who need experience on

research teams and research grant funding. They simply have not received the same level of training, due to limited interaction with research participants with disabilities or even suspension of research activities.

From my perspective as a researcher, the pandemic has uncovered disparities and disproportionalities in how people with disabilities have experienced this disaster. Specifically, people with disabilities living in congregate settings such as nursing homes, group homes, or state-run institutions were disproportionately at-risk of contracting COVID-19. People with disabilities with underlying conditions became ill and died at a higher rate than others. Children with disabilities were also higher at risk--and this created critical concerns for schools when returning to face-to-face instruction, especially when staff around them were unvaccinated. Data on the effects of the pandemic on the academic achievement of children with disabilities is highly critical. However, even while trying to investigate these effects, we researchers have had to distance ourselves so as not to bring illness into schools and infect children. If educators and researchers in the field of disability fall victim to COVID-19, our work on behalf of children with disabilities cannot continue "on the other side" of the pandemic. Not only have students with disabilities been at risk-- research and training on serving students has been at risk."

### Discussion

The narratives here illustrate changes that occurred across multiple educational environments serving students with disabilities. Common themes related to learning and teaching during the pandemic appear across these narratives. The *transition to online learning* at the outset of the pandemic was unexpected, abrupt, and stressful. Each of these narratives reported *an increase in challenges*: Both educators and learners reported steep learning curves and increased academic challenges during the transition to online instruction- which they often had to resolve on their own. Time "at school" increased despite the shift to learning at home and, together with the frustrations of pandemic life, increased stress and irritability for both learners and educators. Our narratives also report *educational problems*, including gaps in training, lower-

quality instruction, and barriers to using educational best practice. Communication skills, social-emotional support, and behavioral interventions were difficult to provide in the remote environment. Educators struggled to provide *effective instruction* virtually, while simultaneously knowing that in-person instruction was dangerous for students with underlying health conditions. We all experienced *difficulty learning or working from home* given privacy, space, technology, and parenting issues. However, we also realized there were some *positive outcomes*, including learning new skills and discovering we were more resilient than we had expected.

Bronfenbrenner's (1976) ecological systems theory provided a useful model with which to examine the contexts surrounding students with disabilities. School closings disrupted the traditional microsystem where student learning typically took place. Within the microsystem of children with disabilities, the pandemic changed the activities of learning and living. For example, Arroya's interactions with friends changed during her adolescence, a time where peer relationships strongly influence personal development. Disruptions within the mesosystem were also evident. Arroya's aunt increased help with online learning and teacher communications while special education teachers struggled to connect with students and their families. In the higher education context (the exosystem), special education teacher preparation changed from face-to-face to virtual. Faculty members strove to teach best practices for students with disabilities, supervisors struggled to provide feedback to student teachers, and research on populations with disabilities was difficult to conduct.

Macrosystemic societal and political issues also affected the education of students with disabilities. Political beliefs influenced how state and educational leaders responded to multiple aspects of the pandemic, provoking polarized positions on mask requirements or resistance, vaccine endorsement or silence, and schooling face-to-face or online. One study found Republican-leaning school districts were more likely to reopen schools in Fall 2020 than were Democratic-leaning districts (Hartney & Finger, 2021). As we wrote our personal narratives, the U. S.

Department of Education took legal action against states that banned masks, citing violation of the civil right to a free and appropriate education, as students with disabilities are disproportionately at risk to COVID-19 when schooling takes place in person (Goldberg, 2021).

Concerning the outer layer of Bronfenbrenner's (1976) ecological model, the chronosystem, our narratives were shaped by progressive changes across time: As the COVID-19 pandemic evolved, our experiences evolved along with it. These experiences were filtered by our different geographical locations in Tennessee, California, and Texas, as each state responded differently to the pandemic at different points in time. For example, Texas schools resumed in-person instruction earlier than schools in California. Changing environmental factors also had their effects: In California, wildfire outbreaks intersected with pandemic outbreaks, as wildfire smoke contributed to an increase in COVID cases (Zhou et al., 2021). We recognize most of these experiences were not unique to students with disabilities and their educators. However, the COVID-19 pandemic exposed and amplified the pre-existing inequalities related to disability (Mann et al., 2021). For example, individuals with disabilities experience disproportionate barriers in using distance technologies and online platforms (Sweet et al., 2019). They exhibit regression in learning and behavioral skills when special education services are disrupted, and schools are closed due to emergencies (Ducy & Stough, 2021; Stough et al., 2020). The pandemic also rippled across the educational systems that surround students with disabilities, affecting special educators and college faculty in disability fields. And, an increasing number of studies report negative effects the pandemic is having on students with disabilities (Asbury et al., 2021; Kim & Fienup, 2021), their families (Iovino et al., 2021), and special education teachers (Smith, 2020). Teacher training (Quezada et al., 2020) and faculty who conduct disability research have also been affected (Rodriguez et al., 2021).

Finally, while Arroya's narrative describes the multiple challenges she encountered during the pandemic, she also describes learning new skills and increased personal resilience. Arroya developed her typing skills,

improved academic performance, and learned to interact successfully with peers online. First-hand accounts from children with disabilities are lacking in disaster studies (Stough et al., 2017). Accordingly, Peek et al. (2018) advocate for recognizing the capacities of children and the importance of listening to their voices during crises: Arroya's narrative, therefore, represents an essential contribution to the literature.

### Conclusion

Our narratives here recount how the experiences of learners and teachers intersected and were interlinked during the evolving pandemic. Multiple accounts have documented the disproportionate impact school closures and remote learning have had on students with disabilities during the pandemic (see Engzell et al., 2021; Mann et al., 2021). Even as the pandemic continues, educators and researchers must address the disproportionate impacts for students with disabilities and their families. Research is also needed on how the educational systems that serve children with disabilities have been affected, including the preparation of special educators and educational researchers.

Moreover, the mental health status of children is concerning. As of May 2022, it is estimated that over 216,000 children in the U.S. have lost a co-residing caregiver to COVID-19, suggesting the need for bereavement support (Treglia et al., 2022). However, few mental health services have been developed for students with disabilities experiencing grief or trauma (Ducy & Stough, 2021; Stough et al., 2017). Families have also experienced considerable losses, including loss of careers and loved ones, and will require mental health attention (Prime et al., 2020). Educators also need mental health support and risk disenfranchised grief when their emotional losses are not acknowledged (Ducy & Stough, 2018).

The impact of the COVID-19 pandemic has been calamitous. With the advent of new COVID-19 variants, challenges for students and educational professionals continue to evolve. Research questions continue to emerge about how this pandemic has affected students with disabilities and their families (Mann et al., 2021). As the COVID-19 pandemic continues to linger across our

concentric educational systems, we continue to learn and work within a “weird normal” that seems to have no clear ending. However, what is clear to all of us is that students with disabilities deserve appropriate educational services

from well-prepared educational professionals- and we must continue to challenge societal structures that create barriers for these students- even while in the midst of a pandemic.

## Funding

This COVID-19 Working Group effort was supported by the National Science Foundation-funded Social Science Extreme Events Research (SSEER) Network and the CONVERGE facility at the Natural Hazards Center at the University of Colorado Boulder (NSF Award #1841338).

## Acknowledgements

We acknowledge Tanya Baker at the Center on Disability and Development at Texas A&M University for her design of Figure 1 in this manuscript. We thank the following members of the COVID-19 and Disability Working Group for their input on the conceptualization of this manuscript: Tanya Baker, Texas A&M University; Lesley Gray, University of Otago; Donghyun Kang, Winona State University; Zachary Morris, Stony Brook University; Cynthia A. Rohrbeck, George Washington University; Amy Sharp, University of Texas at Austin; and Nick Winges-Yanez, University of Texas at Austin.

## References

- Abberley, P. (1987). The concept of oppression and the development of a social theory of disability. *Disability & Society*, 2(1), 5-19. <https://doi.org/10.1080/02674648766780021>
- Asbury, K., Fox, L., Deniz, E., Code, A., & Toseeb, U. (2021). How is COVID-19 affecting the mental health of children with special educational needs and disabilities and their families? *Journal of Autism and Developmental Disorders*, 51(5), 1772-1780. <https://doi.org/10.1007/s10803-020-04577-2>
- Atteberry, A., & McEachin, A. (2016). School's out: Summer learning loss across grade levels and school contexts in the United States today. In K. Alexander, S. Pitcock., & M. Boulay. (Eds). *Summer learning and summer learning loss* (pp. 35-54). Teachers College Press.
- Averett, K. H. (2021). Remote learning, COVID-19, and children with disabilities. *AERA Open*, (7)1, 1-12. <https://doi.org/10.1177/23328584211058471>
- Becker, S. P., Breaux, R., Cusick, C. N., Dvorsky, M. R., Marsh, N. P., Sciberras, E., Langberg, J. M. (2020). Remote learning during COVID-19: Examining school practices, service continuation, and difficulties for adolescents with and without attention-deficit/hyperactivity disorder. *Journal of Adolescent Health*, 67(6), 769-777. <https://doi.org/10.1016/j.jadohealth.2020.09.002>
- Bertilis, K., Granlund, M., & Augustine, L. (2019). Inclusive teaching skills and student engagement in physical education. *Frontiers in Education*, 4(74). <https://doi.org/10.3389/feduc.Bo2019.00074>
- Boon, H. J., Cottrell, A., King, D., Stevenson, R. B., & Millar, J. (2012). Bronfenbrenner's bioecological theory for modelling community resilience to natural disasters. *Natural Hazards*, 60(2), 381-408. <https://doi.org/10.1007/s11069-011-0021-4>
- Bronfenbrenner, U. (1976). The experimental ecology of education. *Educational Researcher*, 5(9), 5-15.
- Centers for Disease Control and Prevention. (2021, August 20). COVID-19: People with certain medical conditions. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>
- Centers for Disease Control and Prevention. (2023, May 5). End of the federal COVID-19 public health emergency (PHE) declaration. <https://www.cdc.gov/coronavirus/2019-ncov/your-health/end-of-phe.html#:~:text=May%2011%2C%202023%2C%20marks%20the,federal%20COVID%2D19%20PHE%20declarati on.>
- Devlin, R., & Pothier, D. (2006). Toward a critical theory of dis-citizenship. In D. Pothier, R. Devlin (Eds.), *Critical disability theory: Essays in philosophy, politics, policy, and law* (pp. 1-24). UBC Press.
- Ducy, E. M., & Stough, L. M. (2018). Teacher perspectives on grief among children with intellectual disabilities. *Journal of Loss and Trauma*, 23(2), 159-175. <https://doi.org/10.1080/15325024.2018.1434859>

- Ducy, E. M., & Stough, L. M. (2021). Educational experiences of children and youth with disabilities impacted by wildfires. *Disaster Prevention and Management*, 30(3), 279–292. <https://doi.org/10.1108/DPM-10-2020-0310>
- Dvorsky, M. R., Shroff, D., Bonds, W. B. L., Steinberg, A., Breaux, R., & Becker, S. P. (2023). Impacts of COVID-19 on the school experience of children and adolescents with special educational needs and disabilities. *Current Opinion in Psychology*, 52, 1-8. <https://doi.org/10.1016/j.copsyc.2023.101635>
- Ellis, K., & Kent, M. (2011). Does that face-“book” come in braille? Social networking sites and disability. *Disability and New Media*, 7, 95–112. <https://doi.org/10.4324/9780203831915>
- Endrew F. v. Douglas County School District, 580 U.S. (2017). [https://www.supremecourt.gov/opinions/16pdf/15-827\\_Opm1.pdf](https://www.supremecourt.gov/opinions/16pdf/15-827_Opm1.pdf)
- Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences*, 118(17), e2022376118. <https://doi.org/10.1073/pnas.2022376118>
- Federal Emergency Management Agency (2021, September). Region IV COVID-19 Interagency Coordination Highlights Executive Summary: Reporting Period: September 23-29, 2021.
- Goldberg, S. B. (2021, September 21). [Letter to Mike Morath]. United States Department of Education Office for Civil Rights. <https://www2.ed.gov/about/offices/list/ocr/correspondence/other/20210921-texas-ea.pdf>
- Hartney, M. T., & Finger, L. K. (2021). Politics, markets, and pandemics: Public education’s response to COVID-19. *Perspectives on Politics*, 1–17. <https://doi.org/10.1017/s1537592721000955>
- Houtrow, A. J., Larson, K., Olson, L. M., Newacheck, P. W., & Halfon, N. (2014). Changing trends of childhood disability, 2001–2011. *Pediatrics*, 134(3), 530-538. <https://doi.org/10.1542/peds.2014-0594>
- Individuals With Disabilities Education Act, 20 U.S.C. § 1400 et seq. (2004).
- Iovino, E. A., Caemmerer, J., & Chafouleas, S. M. (2021). Psychological distress and burden among family caregivers of children with and without developmental disabilities six months into the COVID-19 pandemic. *Research in Developmental Disabilities*, 114, 103983. <https://doi.org/10.1016/j.ridd.2021.103983>
- Jameson, J. M., Stegenga, S. M., Ryan, J., & Green, A. (2020). Free appropriate public education in the time of COVID-19. *Rural Special Education Quarterly*, 39(4), 181–192. <https://doi.org/10.1177/8756870520959659>
- Kee, K. A., Asmundson, V., & Vang, T. (2023). Educational impacts of the COVID-19 pandemic in the United States: Inequities by race, ethnicity, and socioeconomic status. *Current Opinion in Psychology*, 52, 1-5. <https://doi.org/10.1016/j.copsyc.2023.101643>
- Kim, J. Y., & Fienup, D. M. (2021). Increasing access to online learning for students with disabilities during the COVID-19 pandemic. *The Journal of Special Education*, 55(4), 213-221. <https://doi.org/10.1177/0022466921998067>
- Kuhfeld, M., Soland, J., & Tarasawa, B. (2020). Projecting the potential impact of COVID-19 school closures on academic achievement. *Educational Researcher*, 49(8), 549-565. <https://doi.org/10.3102/0013189X2096591>
- Mann, M., McMillan, J. E., Silver, E. J., & Stein, R. E. K. (2021). Children and adolescents with disabilities and exposure to disasters, terrorism, and the COVID-19 pandemic: A scoping review. *Child and Family Disaster Psychiatry*, 23(12). <https://doi.org/10.1007/s11920-021-01295-z>
- Martínez-González, A.E., Moreno-Amafor, B., & Piqueras, J.A. (2021). Differences in emotional state and autistic symptoms before and during confinement due to the COVID-19 pandemic. *Research in Developmental Disabilities*, 116, 1-7. <https://doi.org/10.1016/j.ridd.2021.104038>
- McFayden, T. C., Breaux, R., Bertollo, J. R., Cummings, K., Ollendick, T. H. (2021). COVID-19 remote learning experiences of youth with neurodevelopmental disorders in rural Appalachia. *Journal of Rural Mental Health*. 45(2). 72–85. <https://doi.org/10.1037/rmh0000171>
- National Center for Educational Statistics. (2020). *The condition of education 2020* (NCES 2020-144). <https://nces.ed.gov/pubs2020/2020144.pdf>
- Office of Special Education and Rehabilitative Services (OSERS). (2021, August 24). *Return to school roadmap: Child find under part B of the Individuals with Disabilities Education Act*. <https://sites.ed.gov/idea/files/rts-qa-child-find-part-b-08-24-2021.pdf>
- Office for Civil Rights (OCR). (2021, June 9). *Education in a pandemic: The disparate impacts of COVID-19 on America’s students*. <https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf>
- Oliver, M. (1986). Social policy and disability: Some theoretical issues. *Disability, Handicap & Society*, 1(1), 5-17. <https://doi.org/10.1080/02674648666780021>
- Peek L., Abramson D.M., Cox R.S., Fothergill A., Tobin J. (2018). Children and Disasters. In: Rodríguez H., Donner W., Trainor J. (Eds). *Handbook of disaster research* (pp. 243-262). Springer. [https://doi.org/10.1007/978-3-319-63254-4\\_13](https://doi.org/10.1007/978-3-319-63254-4_13)

- Phillips, B. D. (2015). Inclusive emergency management for people with disabilities facing disaster. In I. Kelman, & L. M. Stough (Eds). *Disability and disaster* (pp. 31-49). Palgrave Macmillan.
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631-643. <http://dx.doi.org/10.1037/amp0000660>
- Quezada, R. L., Talbot, C., & Quezada-Parker, K. B. (2020). From bricks and mortar to remote teaching: A teacher education program's response to COVID-19. *Journal of Education for Teaching*, 46(4), 472-483. <https://doi.org/10.1080/02607476.2020.1801330>
- Rodriguez, G., Monteleone, R., Munandar, V. D., & Bumble, J. L. (2021). Blurring the boundaries: Reflections from early career faculty during the COVID-19 era. *Intellectual and Developmental Disabilities*, 59(1), 1-6. <https://doi.org/10.1352/1934-9556-59.1.1>
- Running Bear, C., Terrill, W. P., Frates, A., Peterson, P., & Ulrich, J. (2021). Challenges for rural native American students with disabilities during COVID-19. *Rural Special Education Quarterly*, 40(2) 60-69. <https://doi.org/10.1177/8756870520982294>
- Saad, L. (2021, September). More in U.S. vaccinated after Delta surge, FDA decision. Gallup News, <https://news.gallup.com/poll/355073/vaccinated-delta-surge-fda-decision.aspx>
- Sayeski, K. L., Bateman, D. F., & Yell, M. L. (2019). Re-envisioning teacher preparation in an era of Endrew F.: Instruction over access. *Intervention in School and Clinic*, 54(5), 264–271. <https://doi.org/10.1177/1053451218819157>
- Shakespeare, T. (2006). The social model of disability. In L. J. Davis (Ed.) *The disability studies reader* (2<sup>nd</sup> edition), 197-204. Routledge.
- Sibley, M. H., Ortiz, M., Gaias, L. M., Reyes, R., Joshi, M., Alexander, D., & Graziano, P. (2021). Top problems of adolescents and young adults with ADHD during the COVID-19 pandemic. *Journal of Psychiatric Research*, 136, 190–197. <https://doi.org/10.1016/j.jpsychires.2021.02.009>
- Smith, C. (2020). Challenges and opportunities for teaching students with disabilities during the COVID-19 pandemic. *International Journal of Multidisciplinary Perspectives in Higher Education*, 5(1), 167-173. <https://doi.org/10.32674/jimphe.v5i1.2619>
- Stough, L. M., Ducey, E. M., & Kang, D. (2017). Addressing the needs of children with disabilities experiencing disaster or terrorism. *Current Psychiatry Reports*, 19(4), 24. <https://doi.org/10.1007/s11920-017-0776-8>
- Stough, L. M., Ducey, E. M., Kang, D., & Lee, S. (2020). School safety and students with disabilities. *International Journal of Disaster Risk Reduction*, 45, 1-10. <https://doi.org/10.1016/j.ijdrr.2019.101447>
- Sweet, K., LeBlanc, J., Stough, L. M., & Sweany, N. (2019). Community building and knowledge sharing by individuals with disabilities using social media. *Journal of Computer Assisted Learning*, 1-11. <https://doi.org/10.1111/jcal.12377>
- Tissington, L. D. (2008). A Bronfenbrenner ecological perspective on the transition to teaching for alternative certification. *Journal of Instructional Psychology*, 35(1), 106-111.
- Tokatly Latzer, I., Leitner, Y., & Karnieli-Miller, O. (2021). Core experiences of parents of children with autism during the COVID-19 pandemic lockdown. *Autism*, 25(4), 1047–1059. <https://doi.org/10.1177/1362361320984317>
- Treglia, D., Cutuli, J. J., Arasteh, K., & Bridgeland, J. (2022). Parental and other caregiver loss due to COVID-19 in the United States: Prevalence by race, state, relationship, and child age. *Journal of Community Health*, 48, 390-397. <https://doi.org/10.1007/s10900-022-01160-x>
- Turk, M. A., Landes, S. D., Formica, M. K., & Goss, K. D. Intellectual and developmental disability and COVID-19 case-fatality trends: TriNetX analysis. *Disability and Health Journal*, 13(3), 1-4. <https://doi.org/10.1016/j.dhjo.2020.100942>
- World Health Organization. (2020, April 27). Archived: WHO timeline - COVID-19. <https://www.who.int/news/item/27-04-2020-who-timeline---COVID-19>
- World Health Organization. (2021, December 1). WHO coronavirus (COVID-19) dashboard. <https://covid19.who.int/>
- Zhou, X., Josey, K., Kamareddine, L., Caine, M. C., Liu, T., Mickley, L. J., ... & Dominici, F. (2021). Excess of COVID-19 cases and deaths due to fine particulate matter exposure during the 2020 wildfires in the United States. *Science Advances*, 7(33). <https://doi.org/10.1126/sciadv.abi8789>