Pre-Service Teachers and the Next Generation of Agile Teaching Through Crisis

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Pre-service teacher candidates have experienced extreme stressors from COVID-19 through both the lens of postsecondary students and clinical practitioners. This duality provided a complex understanding of crisis management within instructional settings for future incoming teachers. This article discusses trauma-related student behavior brought on by COVID-19 and introduces agile teaching practices such as reflective practices and integrated use of technology. Reflective practices help educators unpack teaching practices and apply ideas and concepts in novel ways. Technology tools help to strengthen relationships, communication, and collaboration reducing crisis related behavior. Future implications include addressing technology inequity and crisis planning.

Since March of 2020, educators, pre-service candidates and classroom students have faced a complicated duality of teaching and learning. All are struggling to learn new ideas while grasping to deal with the personal crisis experienced as a result of COVID-19. Students and teachers alike have experienced a complex range of emotions and traumatic events that are changing the way students experience learning and how educators deliver content. Unlike singular traumatic experiences, COVID-19 has persisted creating a series of challenges that continue to alter our educational landscape. Teachers and students alike have been asked to adapt like never before. Unfortunately, our adaptations even with the best of intentions have not always benefited students or learning in the way we intended. Educators are asked to evaluate complex trauma and trauma-based behavior during COVID-19. It is critical that we consider effective practices that are flexible enough to address the ever-changing needs of P-12 students while also paying careful attention to the trauma that has been brought on by the current pandemic; through both the personal and pre-service professional lens. One way pre-service teachers were able to quickly pivot reducing trauma-based behavior relied heavily on technology skills. Teacher candidates were able to learn and directly apply educational experiences to become the next generation of agile teachers through daily digital intergeneration in combination with reflective practices.

Trauma and the Pandemic

The Substance Abuse and Mental Health Services Administration (SAMSHA, 2019) defines trauma as the psychological/emotional response to an event or series of events perceived to be emotionally harmful or life threatening that has lasting adverse effects. Individual student experiences throughout the pandemic have varied significantly and represent varying degrees of complex trauma. One key element to consider when defining trauma is personal experience. It is important to note how one perceives events may be very different from the perceptions of others. While some might be troubled by a given experience, it may not affect others at all. The impact of COVID-19 is similar in that personal experiences during the pandemic vary significantly. COVID-19 has brought on a series of micro events creating increased risk for complex trauma. The National Child Traumatic Stress Network (NCTSN) defines complex trauma as exposure to multiple interpersonal traumatic events, over a prolonged period of time, with the potential for major long-term developmental impacts (Spinazzola et al., 2017). Throughout the pandemic students have been exposed to an increased risk of complex trauma such as food insecurities, neglect, exposure to parental violence, physical, sexual, or psychological abuse, and isolation. Unique pandemic-related factors that complicate trauma include: social Isolation, elevated death rates, financial insecurity, nutritional disparities, increased in unchecked child abuse and maltreatment, and inconsistent school culture (school closures, masking, and unpredictable educational routines).

NCTSN (n. d.) explains that complex trauma can manifest in a variety of different ways. Some students present challenges with trust resulting in difficulties with attachment and relationships, and self- perception. Self-worth is an additional concern due to complex trauma. Students believe themselves to be bad and view the world as a terrible place, thus experiencing a sense of worthlessness, shame, guilt, low self-esteem, and a poor self- image. Their physical health can also be affected by challenging immune systems, unexpected physical reactions, and body dysregulation where they exhibit an over or under response to stimuli. Emotionally, some students present limited language to explain how they feel. They can demonstrate high levels of vigilant, guarded behavior during social interactions. In these cases, teachers should look for student behavior that appears as if they are separating themselves from the experience. Memory loss when talking about certain situations is a possibility as well as a loss of self-identity. More commonly, teachers should expect to observe student behavior that is different from their peers. Some behavioral changes include oppositional behavior, unpredictability, issues with self-control, and high-risk behavior. Overall,

students experiencing trauma brought on by the pandemic appear as though they are only living for the moment, with little regard for others. With such complexities, educational outcomes take a back seat to daily survival.

Technology and Trauma

Pre-service teachers who graduated May 2021 were expected to balance the role of both students and teachers in the midst of COVID-19. Throughout the academic year of 2020-2021, pre- service teachers spent time in the classroom as both: students and teacher candidates. During this time in the classroom, pre-service teachers learned appropriate technology use in the classroom pre-COVID-19 and practiced this skill set within the K-12 classroom structure; thus lessening stressors associated with trauma. Starkey et al. (2021) stated that technology selection should include tools that offer flexible access, social interaction, communication and collaboration across both traditional and virtual settings. A few key technology tools targeted by one pre-service teacher to support students include: Nearpod, Google Classroom, and Zoom (see Figure 1).

Figure 1: Technology Tools

Resource	Explanation and benefits
Nearpod https://nearpod.com	Nearpod is an engaging website that supports interactive digital lessons that students can complete synchronously or asynchronously. Nearpod includes an extensive list of prepared lessons searchable by grade level and topic while also supporting teachers in developing their own materials. Modules can include youtube videos, voice recordings, games, formative assessments, graphic organizers, and interactive activities. Students are able to record responses and submit any work completed to the teacher completely through the nearpod system. Nearpod also allows students to interact with the teacher through submitting questions and while on synchronous session live chat. Teacher's are able to provide immediate feedback by sharing student work and providing further instruction based on formative assessments throughout the module.

Resource	Explanation and benefits
Google Classroom	Google classroom is an online sharing point for teachers to create a user friendly and interactive classroom webpage that pairs directly with google resources such as google docs, slideshow, and sheets. Google Classroom can be used to turn in assignments, share materials, connect with parents, and create assignments. Google classroom also has the capability to allow for digital collaboration live without the need for video conferencing. Teachers are able to enable and monitor class/group chats and track who has contributed information on documents or the webpage.
Zoom	Zoom allows a person to host and monitor video conferencing from both internet access and telecommunication. Hosts are able to share screens with viewers, monitor students' engagement through different features such as breakout rooms. Zoom has allowed students to participate in events and activities beyond the classroom. Teachers can invite guest speakers to the classroom at limited to no expense. Students who are absent receive lecture content and contribute to group conversation. Working parents can quickly log in to teacher conferences from anywhere. Zoom allows teachers access to professional development across the world without the constraints of travel.
Digital Reading Resources https://www.readworks.org https://newsela.com	Digital Reading resources such as readworks.org and newsela.com allow educators to provide leveled text through an online platform while tracking their reading progress, comprehension, and ability to answer inferential questions. Both sites can be used as stand alone websites. Teachers can pull reading materials from or used with classroom sets that include accounts for each student. Teachers can track progress and assign work with due dates.

Technology tools help to strengthen relationships, communication, and collaboration. Educational technology bridges the gap between students and teachers no matter their physical location when used appropriately. Supporting students through trauma in the classroom can be implemented through the use

of technology-based tools. The use of classroom-based digital resources year round provides K-12 students consistency and structure. Students are then able to easily transition to online learning with little added stress to the already stressful situation. A teacher's response greatly impacts students in their classroom. Implementing digital resources into the classroom's daily schedule supports both students' transition and that of the teacher. This overall consistency can support a positive classroom environment that nurtures students' developmental needs both socially and emotionally.

Reflective Practices

At the core of agile teaching and learning, reflective practices can help us gain a deeper understanding of how to address behavior resulting from COVID 19, ranging from simple instructional challenges to trauma for both K-12 and post-secondary students.

Educators are expected to be at the forefront of stability and structure when these events occur; however, the pandemic offered little opportunity to think first and act later. The process of reflecting is commonly an afterthought to a singular event, yet it is the cornerstone of educational practices (Mathew et al., 2017). Mathew et al. state that reflective practices facilitate teaching, learning, and understanding. Even though the pandemic continues to disrupt daily life, and wreak havoc on educational outcomes, it is important that we reflect on future actions. During the post crisis of COVID-19, we should resist the urge to dust ourselves off and shelve key strategies and practices that have helped us through. We might even quickly dismiss lessons learned. However, the pandemic has taught us more than resiliency. It has uncovered significant issues related to technology. Issues such as digital inequity, accessibility, inclusiveness, and parental engagement were all a concern (Greenhow et al., 2021). We have also come to understand trauma and complex behaviors. We have a better understanding of how adverse childhood experiences, including those brought on by COVID-19, can distort one's perception of current environmental expectations, resulting in behavioral changes in the classroom.

Discussion

Over the past school year many students have experienced extensive complex trauma that included a multitude of environmental and social factors. School closures and limited social interaction has played a significant role in contributing to complex trauma during the pandemic. Educators should work to address

complex trauma in a meaningful way that fosters a safe learning environment that extends beyond the classroom walls. Technology offers a key to lesson trauma negative impacts that occur during a crisis. We are expected to use problem solving across a wide variety of technology and educational practices. However, learning how to teach and practicing teaching methods during a crisis can seem to be a Herculean undertaking. By understanding the trauma students and teachers both face, educators can avoid crises and implement strategies that address various dynamics of trauma and foster social emotional learning (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2021). Effective use of technology offers an opportunity for teachers to support students and reduce the traumatic impact of COVID-19. The need for agility does not end with the COVID-19 pandemic. Natural disasters, school shootings, and catastrophes will continue to affect our students and teaching. It is critical that we cultivate the next generation of agile teachers and students. By looking back at how the pandemic impacted each of us, we can learn what has worked and what improvements continue to be needed in future.

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