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Chapter

Intentional Teaching: Building Resiliency and Trauma-Sensitive Cultures in Schools

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Abstract

In a time where many students and their families are grappling with uncertainties and educators are faced with uniquely complex challenges in the delivery of effective instruction, the ability to create educational communities that respond to the needs of all learners is crucial. There is increasing emergence of technology and pedagogy that have facilitated connections to the classroom never seen before. Yet, educators and school communities need to respond to this time of uncertainty with the lens of trauma sensitive instruction, the creation of meaningful teacher-student relationships, and building the resilience necessary for students to thrive in the ever-shifting landscape of education. This descriptive paper explores strategies for implementation including creating safe spaces for learning, addressing disparities in learning opportunities, preventing academic disruption, and using a proactive approach to address stress and trauma in the classroom. The multitude of teaching modalities available has paved the way for a transition to fluid education but the need to do so with intentionality cannot be ignored. The transition to remote and hybrid learning may change the landscape of education forever, and with it comes the responsibility to ensure high expectations for student success are balanced with compassion, and rigidity is replaced with flexibility.

Keywords: trauma-sensitive instruction, pandemic resources, safe spaces, resiliency, connection

1. Introduction

Adversity and crises are commonplace throughout the world, with most individuals having experienced at least one adverse event in their lifetime. Yet these experiences and the ability to effectively adapt to them vary significantly from person to person [1, 2]. Significant events such as school shootings, natural disasters, and societal unrest have regularly gained national attention and created crises in educational systems that required responses. Adverse events have shown us that all contexts of individual lives are impacted, including educational environments, and that no one environment will solely be influenced [1, 3, 4]. Therefore, in the face of the current pandemic, we must recognize the impact on all spheres of an individual's life when designing education and learning opportunities. The previous crisis events were on a small scale, short-term basis, and did not create the type of

disruption that has been seen in the current pandemic. Covid-19 has presented a crisis that has influenced the entire globe and has fundamentally altered education as we know it. Being quickly found to spread via person-to-person transmission, the widespread response to Covid-19 was to implement social distancing measures, including at times quarantine, designed to curb the spread [5, 6]. Consistent messages from leaders in governments across the world emphasized the concept of flattening the curve, by measures such as staying indoors, working from home where possible, the closures of businesses and schools, and avoiding social gatherings [5–9].

While Covid-19 is not the only crisis that the educational system has ever faced, it is the one with the most widespread impact and that has posted the greatest number of challenges to overcome. In all of the other crisis experienced, the educational system did not have to make the shift away from in person instruction the way that they have in response to Covid-19. This past year has uprooted the world of education and has pulled the curtain open to just how unprepared educators and systems of education are for crisis situations. Covid-19 created a fast and unique challenge to educational systems, many of which were not equipped to pivot and change course. Educators were asked in a matter of days to completely shift from traditional education modalities to emergency remote learning, in many cases without the skills and resources to do so [10, 11]. As a result of this quick changing landscape of uncertainty, educators were forced to pivot to creative models for instructional delivery including online methods, both synchronous and asynchronous, hybrid models, and flipped classrooms. The introduction and incorporation of learning management systems became commonplace with many students and educators quickly being pushed out of their comfort zones and into educational environments that they were not equipped to manage [8, 11]. While some educators may have been prepared to face such a situation, the vast majority had to make major overhauls to their teaching in a short time without the training, support, or emotional bandwidth necessary [8, 11, 12]. These demands added pressure to already stressed and under resourced educators who were transitioning out of their classrooms and into their homes. Classrooms where boards and erasers sat empty while bedrooms, kitchens, living rooms, and closets became home offices. It was clear through the immediate change of course that the priority was safety rather of students, educators, and society rather than learning experiences [9–11]. Initial messages received from educational systems and administrators to maintain the continuity of instructional methods and academic rigor, quickly shifted into how can we keep students from being overwhelmed and ensure they feel supported [10]? Educators were often expected to reach unattainable goals with inadequate tools.

While initially many may have been pleased by the thought of having an extended break from school, the reality of what it meant to alter the instructional process so vastly coupled with the uncertainty as to when a return to education as usual could occur quickly created stress and confusion in many educators and students [9]. Both Educators and students quickly faced challenges related to technology, travel restrictions impacted foreign exchange students, isolation, and mental health exacerbations [8, 9, 13, 14]. In the absence of typical preparation time, the result was a chaotic transition in which educators attempted to transfer learning environments built upon face-to-face dynamics online in most cases to whatever learning management system their school system had access to [11]. This type of disruption has widespread emotional influences for both students and educators related to identity, safety, and success. Even instructors who have well-established identities as educators will experience stress and anxiety in the face of change and uncertainty. Technology such as laptop computers, cell phones, and tablets that

were once seen as detrimental to the learning process and banned from schools, quicky became the catalyst for instructional delivery.

Covid-19 has impacted the lives of educators and students far beyond the learning environment and such contextual factors cannot be ignored if we are to effectively provide instruction in times of uncertainty. The loss of face-to-face interactions was a necessary sacrifice to ensure the safety of the larger population, implying that staying home and social distancing equated to safety [8, 9, 14]. Yet it was not just the educators who were asked to quickly transition to remote learning and to move out of the traditional classroom and into their homes for a vastly different educational experience. For many students' home does offer the safety that it was conceptualized to, and in many cases it created a profound loss of a school environment that allowed time away from challenging home environments [15, 16] It is important to recognize that for some students home is not a safe environment nor is it always conducive to academic achievement [8, 10, 15, 16]. These challenges for students are intensified by the lack of support from the school environment, community supports, and isolation created by social distancing guidelines [11, 16]. In addition to the vast disparities in home environments [8], geographic distance can directly contribute to teacher and student isolation. Educators became increasingly crucial in providing effective social interactions and assisting in combatting isolation that has been experienced by many. New educator responsibilities increasingly include reassuring students and parents, assisting students in the management of their learning resources, and finding creative ways build virtual communities.

While online instruction has been commonplace for quite some time there is a stark difference between individuals who sign up for an online course and those who are forced into it without preparation. The flexibility that is touted as a major benefit to online learning may not be experienced by many students as access to technology, support, and resources to make online learning a success simply does not exist [6, 7, 10, 17]. While online education is not a new phenomenon, its widespread emergency implementation was wrought with challenges due to the lack of preparedness in educational systems for such a crisis [6–9]. While most educational systems implement some form of technology, many did not incorporate online learning platforms that could readily sustain a shift of such magnitude to a fully online environment [8, 9]. While there exists a plethora of digital technology to transition in traditional teaching models to the online environment, the incorporation of such models requires planning, resources, and effective training, none of which the current pandemic afforded [6–9].

Education provides a stabilizing element for children throughout the world and its absence has been felt, recognized, and appreciated, which represents a perspective shift from previous dependence on it and the expectation of it. Educators and systems of education should seek to harness this recognition and the challenges experienced in the face of an emergency transition to remote learning to create a path forward that strengthens not only our ability to deliver instruction but also our preparedness for the future [11]. We are uniquely poised amid the current pandemic, after the rush of the emergency transition of Spring 2020 has ended, to recognize the critical role that education plays in every aspect of our society and the widespread impact that is felt when "education as usual" dissipates. While the hope of a return to "normal" exists in the hearts of educators and educational systems worldwide, these experiences can be utilized to not only inform ongoing pedagogy but also to further develop the multiple pathways to learning available to educators and students [6–9, 11, 14]. Thus, it is useful to explore both the challenges and successes experienced during this time to not only ensure success in the future but to also to incorporate the strengths that have emerged into ongoing pedagogy and to create intentional teaching strategies that will lead us into the "new normal."

2. Trauma sensitive instruction

2.1 Experience of adversity and trauma

Adversity in the educational environment has been experienced by many school systems with events such as school shootings having a major influence on the perception of safety, the experience of stress and distress, and increase the risk of trauma responses in students [18, 19]. Yet most students who experience significant adverse events in schools have been found to fully recover, there are students who will develop clinical disorders such as Posttraumatic Stress Disorder (PTSD) in their aftermath [18]. Traumatic exposure has been linked to a multitude of issues in children and adolescents including low academic performance, difficulties in interpersonal relationships with peers and adults, engagement in high-risk behaviors, and disruptions to the developmental trajectory [17–24]. School systems are often the entryway through which students access and are referred for mental health support services, with more students receiving help this way than seeking out community based mental health clinics [20]. Trauma exposure presents a unique challenge to educators and educational systems who must strike a balance between their primary goal of academic instruction and the reality that without support the entire child, the goal of education is not attainable [17, 20]. The use of trauma informed instruction and trauma sensitive pedagogy can help to buffer the influence of adverse events on students and educators [17] and is crucial to successful instruction and learning in the face of a global pandemic.

In non-crisis times, research suggests that half to two-thirds of all students will experience a traumatic or adverse event [19, 23, 25] with estimates from the National Survey of Children's health reporting that 46 percent of children under the age of 18 have experienced an adverse event, and 11 percent have experienced three or more adverse events Historically, the concept of trauma is often conceptualized in a pathological light which overlooks the impact of adverse events in everyday life, including the role of social traumas, that can influence the way in which individuals interact with and perceive the world [3, 26, 27]. More recent definitions have expanded trauma from a life-threatening event to include real or perceived threats to individuals physical or psychological well-being with the potential for lasting effects [26–28]. These definitions recognize that as social beings, we are influenced by interactions with those around us and the events that we are exposed to in society and that these events, when they create a real or perceived threat to our psychological well-being can create a stress response in individuals [26–28]. This definition allows for the way in which the event is experienced by the individual, the inter and intrapersonal contexts, to be the avenue by which reactions are determined [26, 27].

Covid-19 has the potential to create stress and trauma reactions in children and adults as they are facing prolonged, chaotic, and unpredictable disruptions in their daily lives, that is based on a perceived danger that is unknown to them and is outside of the control of themselves or their families [6, 16, 28]. These factors have been known to create physiological stress and distress reactions and may be particularly significant for children who have a history of exposure to adverse situations [16]. The current pandemic social distancing guidelines have also increased the prolonged exposure to adversity in home environments that are no longer buffered by time spent in school [13]. In addition, it has added additional socioemotional and financial stress to many families who may lack the coping skills or resources to effectively manage it, resulting in an increase in violence and exposure to maladaptive home environments [13, 29]. Increased family stress related to financial hardships, isolation, and an inability to meet basic needs have become increasingly common and disproportionately so in lower socioeconomic and minority groups,

exacerbating pre-existent disparities [17, 26]. Stress responses and trauma are disproportionately experienced by marginalized populations [6, 13, 26] and the current pandemic is no exception with minority groups experiencing more health-related negative outcomes related to Covid-19 than their counterparts [30].

2.2 Contextualizing student behaviors

While trauma experiences have been correlated to specific responses and characteristics, student stress responses may not always directly reflective the typical presentation [17, 19, 31]. While educators can start by developing an understanding of the way in which trauma can influence the emotions and behaviors of students [32], in order to truly understand the multiple consequences of stress and trauma, educations can seek to adopt a trauma sensitive lens. This approach allows educators to view students in their current contexts and to recognize how stress or trauma may be influencing their current presentation [32]. The use of trauma sensitive instruction helps to shift the perception of students from a reaction to their behaviors to an exploration of the events or context that have had a hand in the development of the behaviors [17, 33] and creates increased ability to find compassion rather than negativity and to create instruction that can meet the needs of individual students. This may also be particularly important in reducing existing and exacerbated disparities in student achievement [17, 33]. It is important to recognize the cumulative impact of stress and trauma for individuals and the role that trauma sensitive instruction can play in decreasing the stress experienced by students and educators [32].

2.3 Trauma sensitive school culture

Trauma sensitive instruction is not simply the implementation of instructional strategies to enhance student learning, it is the creation of a culture throughout all levels of an educational system that is committed to the provision of instruction in a manner that recognizes trauma responses and fosters resilience [26, 32, 33]. It builds upon the goals of prevention and early intervention that are already deeply imbedded in our educational systems [24]. The implementation of trauma sensitive instruction does not seek to pathologize the experience but rather to identify effective ways to engage all students regardless of the presence of a known adverse experience [32]. A trauma sensitive instruction model assumes that all students have experienced adverse events rather than attempting to identify pathological responses in individual students [32]. These practices will need to be aligned with current instructional methods at all levels to be effective [33].

It is a critical time to recognize the role that educators and educational systems play in creating a conducive learning environment and the direct connection between long-term outcomes and educational achievement [12, 17]. To effectively assist students in the face of not only the current pandemic but also with the recognition of the many adversities that they will face throughout their education and life, instruction that is student-centered and responsive to the frequently changing needs of students will be critical. This includes the implementation of flexible learning environments and relational pedagogy as avenues to promote student engagement and the development of resilience to stress [6, 17, 34]. In its implementation trauma sensitive instruction emphasizes the use of relational pedagogy to foster shared responsibility and decision making [6, 12, 17] breaking down the power dynamics and empowering students to co-facilitate their own educational experiences [35]. This approach recognizes the value in listening to students and respects their ability to be directive in their learning trajectories [17]. Trauma sensitive instruction promotes collaboration

through transparency, authentic engagement, and an understanding of what both students and educators regard as important and useful to the process.

While traditional learning models focus on the educator as the transmitter of knowledge [36], here the emphasis is also on the student's construction of their learning experiences. This requires a widening of perspective that balances instruction provision with overall well-being of students [17, 35]. For students who face uncertainties such as the current pandemic or other adverse life events, an effective learning environment incorporates the educator as an academic facilitator and guide with student as co-creator [17]. Trauma sensitive approaches emphasize positive relationships as the catalyst for the development of the foundation for learning and represent a shift away from behavior management models and punitive responses [17]. To be effective, educators must take a proactive approach, providing support and encouragement to actively participate and rewards for taking responsibility for the learning process [17, 34]. This paradigm may also help to balance out the challenges faced by educators and educational systems to emphasis standardized tests and student performance measures and introduce more student-centered accountability measures [17]. Trauma sensitive practices can facilitate the development of self-regulation and foster the development of long-term self-management skills that increase the potential for academic success.

While educators have recognized the importance of attending to student emotional well-being, challenges have been identified in implementing practices that are conducive to such a holistic approach such as large class sizes, demands of preparation and responsibilities, lack of resources, and systemic support [35, 37, 38]. Additionally, Baweja and colleagues found that there is a need to create shared understandings across educators and educational systems of trauma and to provide educators with training on how to identify and respond to trauma [37]. Directly tying in adverse experiences in school districts and student populations was found to increase educator support of these approaches and decrease concerns related to loss of instructional time [37]. The ability for educators to buy into a shift in paradigm will allow for the recognition that finding the time to teach resilience is not time wasted.

The current pandemic has poised educators and educational systems to influence well-being despite an ever changing, chaotic landscape. The ability to facilitate connection building can decrease the isolation experiences and assist educators in restoring their own sense of professional identity [17]. While traditional education exists within the walls of a school building and boundaries of teacher/student relationships, Covid-19 has brought educators into the homes and lives of students, allowing for the opportunity to develop relationships in a new way.

3. The role of safe spaces in education

Trauma sensitive instruction is a pathway to the creation of safe spaces for students to process their experienced and challenge themselves academically. Educators and educational systems are tasked with providing instruction and support not only on the academic plane, but they are also looked upon to promote healthy social relationships between students, to meet the needs of each individual student in their classes and to create a milieu in which all students feel valued and supported. The concept of safe spaces has been discussed regularly in the literature on education and has been incorporated into teaching pedagogy by many educators and educational systems. A safe space has been defined by Holley and Steiner as a climate in which students feel safe expressing themselves openly and honestly, taking risks to explore the root of their views, beliefs, and opinions and in many

cases confronting themselves and others [38]. This definition highlights that it is not the physical space that is safe or the catalyst for the experience of safety, rather it is a climate that is free from the potential for of psychological or emotional harm [15, 38–41]. It is a definition that highlights the educational contexts that have been found to foster intellectual and social learning for students [42]. In practice, this educational milieu is free from purposeful embarrassment and facilitates risk taking by students in the learning process, making this environment a place where failure is an option and accepted [38, 39]. Safe spaces are built upon mutual respect and promote healthy social interactions and an atmosphere for community building and academic success [38, 39]. These learning environments recognize the connectedness between student well-being and their academic achievement [40] and seek to balance both presenting needs.

Safe spaces are not environments that are free from discomfort or controversy but rather they are environments that foster the ability to have challenging conversations without the threat of emotional harm or judgment [39, 42]. Safe classroom spaces can decrease the negative experiences of students who are willing to take risks in sharing their views and experiences by engaging in personal disclosure [39]. As a pedagogical approach, safe spaces refer to the actual experiences of students in the classroom as being free of fear, self-doubt, and social exclusion creating the intellectual and emotional safety necessary to openly disclose information that they otherwise may have self-censored [41, 43]. They value opportunities to where students openly demonstrate their individuality and supportively acknowledge the experiences of discomfort or struggle [38, 39]. Educators of safe classrooms balance the curriculum, pedagogy and assessment measures that balance risk and rewards [42].

3.1 Climates of safety in adverse times

In non-crisis times, educators recognize the struggles that students often have with class requirements such as participation, group work, and presentations, these challenges do not dissipate in the online environment [42] and may be exacerbated by the stress that already exists in mastering the transition online. While instruction is often built around the expectation of personal risk-taking and critical inquiry to foster and self-determine intellectual advancement, this pedagogy is best paired with an environment that makes it safe to do so [42].

In the face of Covid-19, societal unrest, and widespread controversy, students are regularly exposed to a multitude of attitudes and beliefs about social distancing practices, governmental responses, and safety which can increase their experience of anxiety and create confusion related to whom they can trust [15, 44]. We would be remiss if we did not recognize that not only was the introduction of social distancing meant to stop the spread of a pandemic illness, there was also a very real component of fear as messages that safety is best achieved by staying home became commonplace and began to influence the behaviors and daily lives of individuals and families across the globe [15]. The Covid-19 pandemic, with social distancing and safety protocols, has created a gap in the emotional and community support that individuals have access to increasing feelings of isolation and anxiety [44].

Safe spaces incorporated into educational practices afford students the experience of consistency and continuity in the face of quickly changing contextual landscapes [15]. There is a need to create environments where fears and concerns about Covid-19 and other adverse life experiences can safely be talked about rather than proceeding with instruction as if nothing is remiss. The avoidance of these conversation ignores the stress and experiences that many students and educators are experiencing and misses crucial moments to develop relationships through

transparency, vulnerability, and shared experiences [10]. Instead, educators can increase their emotional presence thereby creating a climate of empathy and compassion [6] and normalizing conversations about emotional health and holistic well-being. While we can recognize that students may not be able to retain all of the information that they learn during times of adversity, the experiences and feelings that they had during this time can frame how they view education moving forward [6].

3.2 How to create safe spaces in the classroom

While safe spaces have been widely explored in the literature, their ongoing implementation and emphasis as a pedagogical approach represented more of a cultural ideal than a necessary practice [38]. Safe spaces have been correlated with increased student responsibility and engagement in the learning process in traditional educational settings, they may play an even greater role in the success of virtual environments where educators cannot use physical proximity to ensure that behavioral expectations are met [39]. Tasked with the goal of not only providing instruction but also promoting healthy social relationships between students, teachers must explore how they can continue this in a virtual environment.

While many educators understand how to create safe spaces in their classroom environment, the ability to translate these concepts into an online learning environment requires a different level of understanding of the concept and skills to implement it [45]. This requires starting with the recognition that it is no longer education as usual and using mindfulness to approach online student instruction [45]. As students are exposed to a multitude of new online instructional formats, the need to adapt to them and the rules for each one can be a stressful transition for many, one that needs educator awareness, support, and recognition [45]. We would be remiss if we assumed that student's ability to utilize technology such as cell phones and social media accounts equates to their ability to navigate new instructional platforms [45].

In order to create safe spaces, educators must move beyond traditional lesson planning, incorporating the flexibility for the vast array of emotions that may be experience by themselves and students through the school day and year [40]. This includes the ability to be vulnerable and a willingness to share about themselves and their experiences [10, 39]. Holley and Steiner found that qualities students identified in educators that fostered a safe environment included being welcoming and approachable, having a non-judgmental demeanor, being emotionally present and supportive of students who take the risk to share [39]. Educators can establish safe classrooms by partnering with students in the development of ground rules for interactions with peers and the teacher and by reinforcing a common understand of appropriate engagement and class climate [39, 46]. The process of student-centered norm development increases buy in from students and the concept of co-creators of the classroom community. These rules include the recognition that we cannot share in a manner that is intended to harm another student and providing examples of constructive framing and inappropriate sharing are useful to establishing shared responsibility [39]. While it is tempting to utilize all of the technological opportunities available, and to find new innovative and creative ways to deliver lessons, educators must consider the benefits of consistency and simplicity and the comfort that is brought to students through routines [46]. Educators can utilize specific positive feedback as a way to highlight that there are positives in all that students share [46, 47] and to demonstrate that they are listening and value what students share with them [17]. Students also described safe classrooms as having educators

that were culturally sensitive, attended to the cultural issues that occurred in the classroom and valued the diversity of the students [39, 48]. This practice helps to create inclusion and a greater sense of belonging for underrepresented groups that can experience increased vulnerability in the classroom [42].

While safe classrooms foster students' willingness to question their own beliefs, they also require educators to be willing to look at their beliefs and to recognize when there may be errors in their logic [39]. Educators are role models for students and as such can model the types of interactions that are expected in the classroom [39]. Evidence suggests that students in safe spaces perform better academically [39, 40]. Holley and Steiner found that students valued safe classroom spaces and identified this milieu as playing a role in both what they learned and how much they learned [39]. Students reported that safe classroom environments gave them additional learning opportunities by exposing them to the ideas and experiences of other students, thereby helping to expand their personal views, increase their creativity and facilitating experiential learning [39]. Further students reported that they learned more in safe classroom spaces and that this knowledge was more likely to be practically applied to their lives and fields of study [39]. Safe spaces were found to increase student self-awareness, communication skills and to create an environment where they felt challenged to learn [39]. This is consistent with research that found increased academic performance in safe classrooms, particularly in environments that created connectedness between students and educators [38].

Safe spaces allow students to express themselves and experiment with their identity, this includes their place in social structures and provides experiences in managing social pressures across the multiple contexts in their lives [41]. They build upon the social nature of children and the social expectations that they are presented with [41]. It is important to recognize that not all students will experience safe spaces equally and that classroom climate will need to be a fluid construct as students experience changing relational and social contexts [41]. While it is unclear how the educational system will define itself after Covid-19, it is clear that the integration of safe spaces increases outcomes and enhances learning opportunities for students and helps to decrease disparities. Safe spaces can create a positive climate that facilitates participatory engagement and responsibility for learning outcomes.

4. Educational transformation: toward the new normal

Online education programs, while increasingly popular has heard many criticisms for lack of rigor, similar costs, low student success rates, are generally revered as less desirable than traditional educational environments [49, 50]. This view became intensified in the Spring of 2020 when many chaotic transitions to online education left educators, educational systems, students and the public questioning the education students would receive in coming academic years in the face of a continuing pandemic. This may have perpetuated the misconception that online education is inferior to classroom instruction and that education as usual is the best option for school systems as educators did not have access to the preparation time necessary to create and design virtual courses [6, 11]. This left many simply transferring their classroom work into online platforms [6, 11]. Yet online education has been an attractive option for many students and families due to its accessibility, convenience, and student-driven learning strategies [15, 50]. It also, when planned and implemented correctly, has the ability to sustain educational systems facing adverse situations.

Covid-19 has left footprints on the educational system that will last for years to come and presents a unique opportunity to transform traditional educational modalities into contemporary learning models. While the transition in the Spring of 2020 was emergent, the academic year 2020–2021 was not and it has opened the door to embracing successes and challenges to formulate new educational milieus constructed from these experiences. These instructional strategies and educational environments would move beyond a crisis response and shift pedagogy and educational emphasis.

4.1 Teaching with intentionality: one size does not fit all

While social distancing in its earlier conceptualizations referred to the cultural and social distance between groups in society, it has now taken a broader that encompasses physical distance as well [15]. It is with intention that we must recognize the different comfort levels and experiences of educators and students during the pandemic and varying levels of restrictions, and to recognize the cultural context in which these experiences exist [15]. While there is a significant benefit to being able to create continuity through continued education, the transition of traditional education online is not without obstacles. While some students will excel in models of self-regulated learning, others will flounder and feel lost. Students have struggles with self-direction, access to learning materials and learning environments as well as feelings of isolation [51, 52]. When students and educators transitioned out of classrooms that were free from distractions and into their homes that often house siblings, other family members, and pets, all of whom are also participating in daily life while students are attempting to focus on remote learning.

Educators and systems of education must be up to the task of preparing to respond not only to the unique needs of each student but also to the multiple contexts in which students lives exist. For the vast majority of students, this is their first exposure to social distancing, stay at home orders, and the many restrictions that have been put in place as a result of the pandemic, including an emergency remote learning shift [53]. Many students have experienced anxieties related to how Covid-19 will impact their academic performance and their ability to continue to progress academically, having their previous identities as students shaken [53].

Although technology is commonplace in our daily lives and allows us to stay connected when geographic location prohibits it, it does not readily replace the connections that exist when we are able to be in close physical proximity of others. Technology has helped us to facilitate education when the current public health situation prevented meeting physically, however, technology is only one piece of the success of remote learning. While technology regularly has its place as a supplemental learning tool, Covid-19 has been the first time that it has been used to replace face-to-face instruction [54]. Educators must be intentional in building classroom communities that create connection to the students and that foster connections between students. The transition to remote learning creates a shift in classroom milieu when students can no longer receive non-verbal cues from the reactions of educators and other students that must be considered when planning online learning communities [52, 55]. When educators and students meet in person, they can readily recognize when the material is not resonating for a student or when a lesson plan needs to be extended or adjusted based upon what they can see from students' reactions, however, this can be quite different in a virtual environment and requires creativity and flexibility to build a community that fosters what may have come naturally before. Educators can utilize their understanding of contextual influences, trauma responses, and stressors to create safe spaces for equitable learning experiences for all students.

4.2 Technological resources and digital competence

Technology was the cornerstone of ensuring that the educational system was able to continue to function in the face of a global crisis. As such, individuals with limited technological resources or that had poor internet connection were at a significant disadvantage during this transition [7, 12, 53, 58, 59]. School systems found themselves faced with large percentages of their population lacking the basic technological resources and internet to participate remotely, thus creating a demand for the distribution of resources to families and students in need [7, 60]. Students in remote and rural areas struggle with network capacity, leading to loss of educational opportunities [53, 58–61]. Socio-economic status has also been found to be directly linked to technological resources, as the poverty level increases in a community the rate of technological resources decrease [12, 56]. While many school systems were able to ameliorate the lack of technological by distributing resources to many students and their families, the transition to remote learning was slowed for these students, creating concern around loss time and instruction [7, 12, 61].

This raises significant concern regarding a system that is tasked with bridging the equality gaps of its students that was significantly usurped in this effort by a pandemic that accelerated educational inequalities at an alarming rate [12, 57, 60]. Many students who previously had relied upon the school resources for access to technology were at a significant disadvantage to students who had access to personal technological resources [56, 57]. Equity issues related to social capital, access, and vulnerabilities were reported by students creating a widespread concern for the exclusion of marginalized populations due to widening inequities [50, 60]. Even for students who do have access to the internet, many do not have the adequate skills to navigate the multilevel learning modules and online platforms in this new learning modality [53]. There is a vast array of technological platforms and applications that can be employed in remote learning, however, this requires users to be able to navigate the technical configurations which requires digital competence that all students do not possess [58].

The vast differences in educational systems availability of infrastructure and technology that prepared them to transition in emergent situations contributed to the differences experienced by students and education in the weeks following the Covid-19 restrictions [8, 62]. Integrated learning modules and technology to support practical experiences has been significantly lacking highlighting the need for innovated practices such as video simulations and practical exams to assist in closing the gap [60, 63]. Many educational systems were forced to engage in experimental labs by observation rather than participation. Attention will need to be paid the incorporation of field and research experiences to prevent students graduating without skills necessary to be successful [63]. Ensuring that all content is available and accessible from a variety of devices increases the possibility that students who will be able to access it regardless of whether or not they have access to a computer or laptop device [50].

4.3 Assessment in an evolving educational climate

The delivery of quality education is the cornerstone of our educational systems, assessment is often regarded in a similar light, as the means to identify whether students are being given access to and learning what is expected of them. Assessment allows for the evaluation of what students have learned and thus must exist in a manner that is representative of the learning environment, even in times of remote learning and social distancing. The recent transition to multiple online teaching models has increased concern regarding how to effectively assess students without increasing

dishonesty and maintaining the reliability and validity of assessment measures [9]. The current crisis has created a demand for measures of assessment of student learning and outcomes that is fair, safe, feasible, while maintaining its reliability and validity.

The shift to online learning has left students concerned about how their learning environments and opportunities will influence their academic reports and tests [9]. The use of adequate and innovative tools for evaluation and self-evaluation are especially necessary during the Covid-19 pandemic in order to be representative of the changing learning environment and provide students with adequate feedback on their performance. Educators and educational systems have a unique opportunity to create flexibility in assessment methodologies and to harness technology to create innovative measures of educational achievement. Rather than trying to identify ways in which educators can supervise assessment measures remotely and continue with education as usual, harnessing the available media and digital technologies that include text, video, imaging, presentations etc. may be more effective ways for students to demonstrate achievement and progress in a multitude of ways [36]. Digital technology allows for the use of varied timescales for assessment and decreases the need for measures that are time sensitive or location driven [36]. They also readily allow for student accommodations due to individual needs such as extended time with technology also affording the opportunity to access assessments from multiple digital platforms [36].

Educators and students have highlighted the use of informal assessment measures such as self-check quizzes as useful measures of performance and opportunities for feedback without the high stakes of more formal assessment measures [64, 65]. Alternative options such as discussion prompts, video submissions, and collaborative assignments are just the beginning of the creative ways that academic progress can be measured. Educators have reported challenges for integration of innovative assessment measures including time management due to the additional time it takes to provide feedback to assignments such as discussion posts, papers, and other measures using new online technologies [64, 65]. The use of students as moderators or asking students to provide peer feedback may help to reduce some of these stressors for educators. Students have experienced challenges related to the complexity of assessment measures in a time where contact with the educator does not occur in real time [64] and where they are not able to ask questions while taking the assessment as they would traditionally. In order to bridge this gap in support, educators can break down assignments into smaller pieces, providing multiple opportunities for feedback, provide tutorials for students, as well as rubrics that highlight the features of the assignment that will be the major portions of the student's grade [64].

4.4 Preparing for the new normal

The online learning environment leverages technological tools to shift the focus from the educator to that of the student. Such pedagogical styles as inquiry-based learning, problem-centered learning, and integrative learning can be employed to shift the role of educator from one of provider of information to that of co-creator of a dynamic learning process [11]. These pedagogical approaches are conducive to trauma sensitive instruction and the facilitation of safe educational spaces. Educators can create collaborations with students as partners in the learning process [42] thereby increasing student responsibility for their learning and creating a sense of ownership and empowerment [50]. Students should be challenged to discover content rather than be provided with it as an avenue to deepen their learning [11] this includes a conscious shift to activity-based learning assignments in lieu of recorded lectures and assigned readings [66]. To effectively do so, online learning must be structured in such a way that allows for ease of use, with assignments that are clear

to understand thereby decreasing stress levels. While technology tools to provide instruction are plentiful, educators should seek to simplify the process as often as possible and avoid multiple logins, passwords, and platforms for students to learn thereby decreasing the possibility of confusion and anxiety [66]. Educators can also increase effectiveness by implementing modular teaching practices, providing clear structure, breaking up content into smaller pieces, and using repetition as a tool [51].

To provide effective learning opportunities to students we must attend to all contexts in which they are influenced, as all contexts will influence their capacity to learn [12]. Educators can recognize that in the face of global adversity that humility, grace, and unity are at the foundation of instructional success [50]. Conversations about Covid-19 and other adversities that students experience should be talked about including prevention strategies, information regarding public safety, and mental health education [8]. Experiences such as the transition to remote learning should be openly discussed including shifts in expectations, participatory roles, and implementation of technology such as cameras. Educator presence places a central role in the effectiveness of remote learning and experiences of students, perhaps more than in face-to-face classrooms [11, 12, 51]. Educators are challenged to find their voice and presence in an environment where time and space have shifted and are not always synchronous [51, 66] and many students have reported that positive teacher-student interactions are lacking in remote learning [11, 54]. Educators should be planful in their delivery methods of instruction and create multiple communication pathways for students to have access to support and clarification [66]. Assignments and learning expectations should match student readiness, identified with an understanding of all contextual factors, and should seek to be effective yet brief whenever possible to combat student concentration and attending challenges [51].

Recommendations include building the technical infrastructure to provide learning platforms that are easy to access and organized in a manner that is consistent and easy to follow [8, 9, 63]. This includes structure to online learning platforms that is consistent and orderly. Routine can be established in remote learning using consistency in due dates and assignments. All students should have access to the necessary technology, placing a need on educational systems to ensure that families are provided with electronic devices and internet capabilities whenever needed [63]. Educators will also need to be provided with home-based teaching materials that allow for ease of instruction. This includes providing accessible online resources and the consideration of incorporating open access materials to provide additional learning opportunities for students [14, 55].

While educators are revered as experts in their subject matter and have practical teaching experience in a traditional classroom, this does not readily translate into expertise in delivery of instruction online [54]. Educators will benefit from professional development that focuses on pedagogical differences in online learning and developing skills in the use of e-learning tools for assessment and instructional delivery [9, 11, 53, 55, 57, 63]. This includes ways to effectively create classroom climate, encourage student engagement, and ways to provide feedback in real time to students thereby decreasing experiences of confusion and isolation [50, 54]. As educational narratives are changing, pedagogical approaches and methods of interacting need to shift to remain relevant and effective. Trainings and ongoing supports from educational systems should emphasize the demands on educators during times of change, highlighting self-care strategies and building awareness of emotional and psychological responses to crises [40].

Educational systems should work to develop opportunities for practical classroom experiences, such as laboratories, harnessing community resources and stakeholders whenever possible [63]. The incorporation of low-stakes or ungraded assessment measures that allow students to receive feedback and educators to track

student progress can bridge the gap created by the lack of face-to-face observations [64]. Educators and school systems while understandably caught off guard by a global pandemic, now have the experience to ensure that there are contingency plans for all issues that may arise. Implementation of emergency plans for scenarios such as technological issues, internet outages, and times where learning platforms are inaccessible can provide students with steps to follow and decrease confusion or learning disruptions [50, 51]. Methods of student communication and information sharing that are consistent create ease of implementation of back up plans and ensure that students are not scrambling if something does not go according to plan. While the Spring of 2020 created an emergency response in educators, felt widely by students, preparedness can decrease the experience of emergency and provide reassurance and consistency. Continency planning also creates the flexibility to pivot and switch as necessary which is particularly useful in the face of a global adversity that is long-lasting and is experienced in waves [51].

5. Conclusions

Although it is still unclear how the current pandemic will shape educational practices, it presents a significant opportunity to integrate engaging pedagogies, assessment strategies, and interactive technologies to build innovative classroom environments [36]. The quick pivot out of the classroom in the face of the current pandemic created a response of emergency remote teaching and with it many challenges and concerns related to teaching infrastructure, teacher preparedness including training and support, as well as the need to consider the uniqueness of an at home environment versus being in a classroom [8, 51]. Educators have not all been equally prepared for the fast shift to remote learning and there appears to be a lack of mentorship and support designed to increase teacher competency in using digital technologies in an efficient and effective manner [8, 66]. In the emergent transition to remote learning, decisions were often made without an understanding of how the pandemic and resulting experiences have impacted student's ability to learn and has raised concerns regarding the quality of the instruction that they have received [7, 9] exacerbating an already critical lens of online learning. As educational systems have transitioned out of the emergency learning contexts of the Spring of 2020 and into a continued mix of in person, hybrid, and remote learning, it is important that educators and educational systems are able to develop quality instruction and learning environments. If we are planful, educational systems can emerge from this from this global crisis stronger and poised to create long needed changes in learning access and equity.

Adopting a pedagogy of care [6], trauma sensitive instruction, as well as creating safe classroom environments can increase educational outcomes for students both during adverse times and in traditional educational delivery. There are many positive opportunities that will arise from the forced transitions of pandemic education that should be implemented into the "new normal." Educational systems can emerge stronger and educator training programs can utilize this opportunity to incorporate all methods of teaching thus ensuring that all future educators have the capacity to teach in multiple modalities [50]. Educational systems must invest in the necessary resources and educator professional development to lead the educational system forward into new diverse times.

Conflict of interest

The author declares no conflict of interest.

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