



# The times they are a-changin': Teaching and learning beyond COVID-19

David T. Marshall<sup>1</sup> · Tim Pressley<sup>2</sup> · Savanna M. Love<sup>3</sup>

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## Abstract

The COVID-19 pandemic has forced teachers to incorporate many changes to support student learning. In this paper, we present current research focusing on the impact of the changes brought by the pandemic on teachers. Specifically, we discuss the current state of teachers after working the frontline of the pandemic and changes that school leaders and policymakers should consider moving forward. These changes include virtual instruction options for specific groups of students, professional development and support for teachers implementing changes, and being cognizant of the workloads put on teachers. We believe these changes are critical to support student learning, but to also limit teacher attrition.

**Keywords** COVID-19 · Educational change · Educational technology · Hybrid instruction · Instructional technology · Online learning · Pandemic · Teacher burnout · Teacher resources

Teaching has always been a challenging profession, and the job of being a teacher became more demanding during the COVID-19 pandemic. Prior to the pandemic, schooling occurred in person, in a brick-and-mortar building, and lessons and learning products were often paper-based. Since March 2020, teachers have faced many challenges and changes to traditional schooling (Marshall, 2022; Pressley & Ha, 2022). School leaders asked teachers to teach in a range of learning modalities using a number of technologies and tools that were new to them (Marshall et al., 2022a; 2022b). Even teachers who taught in person in a brick-and-mortar school five days

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✉ David T. Marshall  
dtm0023@auburn.edu

<sup>1</sup> Auburn University, 4036 Haley Center, 36849 Auburn, AL, USA

<sup>2</sup> Christopher Newport University, VA, USA

<sup>3</sup> Randolph-Macon College, VA, USA

a week were often asked to teach students who attended remotely simultaneously (Bartlett, 2022; Love & Marshall, 2022).

As the COVID-19 crisis subsides, there has been a call for reflection on this experience. Is schooling going to revert to what it looked like pre-pandemic? Have school leaders and policymakers learned anything from two years of teaching and learning during the pandemic? Of the changes made to schooling during the pandemic, what will persist beyond the crisis? We posit that the changes that are most likely to persist will involve educational technology. We conclude by simultaneously encouraging teachers to buy-in to the continued use of technologies that were implemented during the pandemic, and cautioning school leaders and policymakers about the state of the post-pandemic teaching profession - the backdrop against which these changes will need to be implemented.

## Context

During Spring 2020, teachers shifted to virtual learning with limited preparation or guidance. As society attempted to shift back to a more typical approach to education, a growing debate occurred around how schools should return to learning in the fall of 2020 (Marshall & Bradley-Dorsey, 2020; 2022). School leaders put together plans with multiple instructional approaches including in-person learning, virtual learning modalities, as well as a range of approaches involving a mix of in-person and virtual learning (i.e., hybrid), with some schools and classes changing formats as the spread of the COVID-19 virus surged in regions of the country. Research conducted early in the pandemic found that teachers had high levels of burnout and anxiety and felt overworked (Chan et al., 2021; Marshall, 2022; Pressley, 2021a; Pressley & Ha, 2022). As the 2020–2021 school year went on, teachers continued to adjust instruction based on COVID-19 numbers and instructional demands. Teachers continued to feel high levels of stress and burnout due to the new requirements of the instructional approaches asked of them, the amount of support they received through the continual changes, and the increase in teacher workloads (e.g., Chan et al., 2021; Pressley, 2021b; Pressley & Ha, 2021; Sokal et al., 2021). With support varying from school to school, Chan et al., (2021) found that teachers wanted support with virtual instruction, emotional support, and more flexibility throughout the COVID-19 pandemic, but often did not receive it.

As the pandemic continued, teachers were forced to adjust their instruction based on local policies and instructional approaches (Love & Marshall, 2022). Over the last two and a half years, teachers and schools had to make changes to meet the needs of students, while also keeping students safe – and for any initiative to be successful, there must be an openness to change. This openness to change, however, has not always existed for many educators. As Tyack and Cuban (1995) once observed, schools were institutions that were among the most resistant to change. As COVID-19 becomes endemic, this marks an ideal time to reflect on how the pandemic has changed K-12 education and consider what changes may remain beyond the crisis.

## The post-pandemic teaching profession

More than two years into the pandemic, teachers are experiencing low levels of morale and high levels of burnout (Marshall et al., 2022b; Pressley et al., 2022), and many are considering leaving the profession altogether (Marshall et al., 2022b). It is possible that the post-COVID moment is an opportunity for additional changes to take hold in K-12 education as well. During the first year of the pandemic, teachers experienced significant changes that included new instructional formats and safety procedures such as masking and social distancing. As the pandemic continued, teachers then saw some of these changes continue, but also faced new requirements such as an increase in having to cover the classes of teachers out sick with COVID-19 and constantly changing safety protocols as vaccines became available and states moved back to more normalcy. Throughout the pandemic, teachers experienced a rise in burnout levels (e.g., Pressley, 2021; Sokal et al., 2021), a decrease in morale (Marshall et al., 2022c; Pressley et al., 2022), and a rise in taking steps to leave teaching (Marshall et al., 2022d; Pressley et al., 2022; Zamarro et al., 2022). Ultimately, the state of the teaching profession is in a critical place that is going to require changes to keep teachers in the classroom.

## Changes made during the pandemic

Throughout the pandemic, schools made a multitude of changes to limit student learning loss and keep students safe. Some of the more prominent instructional changes included a switch to virtual instruction at the onset of the pandemic (Marshall et al., 2020), the implementation of hybrid and HyFlex forms of teaching during the first full school year, socially distanced classrooms, and mask requirements. Though some of these changes were seen as challenges for teachers, König et al. (2020) found the pandemic encouraged teachers to learn new instructional strategies and increased communication with students. Some of the changes made in schools were temporary; however, as the world enters the endemic phase of COVID-19, others may persist beyond the pandemic.

In March 2020, much of the chaos that ensued was brought about because schools were not set up for the possibility of remote learning. Teachers had not been trained to teach online (Marshall et al., 2020) and students were not accustomed to learning remotely (Carpenter & Dunn, 2020, 2022). At the same time, parents, teachers, and students were forced to learn technologies that were unfamiliar to them (Love & Marshall, 2022). At the beginning of the pandemic, many schools were creating paper-based instructional packets, which were found to be largely ineffective (Love & Marshall, 2022; Marshall & Neugebauer, 2022) and associated with lower levels of teacher self-efficacy during the initial transition to remote instruction (Marshall et al., 2022a).

As the pandemic continued, teachers had no choice but to learn to use the various forms of technologies available for online teaching and learning. Thus, perhaps the most important changes that took place during the pandemic that are likely to endure involved an increase in technology use. Teachers implemented virtual instruction into

their daily lessons, learned to utilize one-to-one student tablets and/or laptops, and learned to use new learning management systems (Honigsfeld & Nordmeyer, 2020; Kim et al., 2019). As learning management systems became the norm in the United States, students no longer submitted hardcopies of assignments. Instead, students submitted assignments, received feedback, and communicated with their teachers online. Schools will be much better prepared for the next crisis because of the investment in digital infrastructure that took place during the pandemic. Should another crisis occur, teachers and students have now had experience teaching and learning remotely. The process would be much smoother, and schools would likely avoid producing the largely ineffective paper-based instructional packets they attempted to use in March 2020. When schools first closed, teachers brought paper-based lesson plans, stacks of papers in need of grading, physical books, and binders of activities used in previous years' lessons home with them to use. Many teachers had items they needed that they could not physically access with schools closed. These items have now been digitized and are housed online in a learning management system, and resources like textbooks are often available as ebooks for students.

For schools that were offering in-person instruction, the 2020–2021 school year offered parents a choice in how their child(ren) received instruction (Marshall & Bradley-Dorsey, 2020). Parents who wished for their child to learn remotely were afforded that option. Early evidence suggests that remote learning was not successful for most students (e.g., Duckworth et al., 2021; Halloran et al., 2021). However, qualitative evidence suggests that there may have been a subset of students who thrived during remote learning (Cash et al., 2022; Marshall & Neugebauer, 2022). Among those who may have benefited from remote learning are students receiving special education services, especially those diagnosed with Autism Spectrum Disorder (Aloizou et al., 2021). Furthermore, Shaw and Shaw (2021) found that students receiving special education services experienced reduced anxiety when learning from the comfort of their homes. As the crisis subsides, it will be important to understand: (1) who benefitted from virtual learning; (2) the extent to which their academic performance improved under these conditions; and (3) perhaps most importantly, how these students can be better served moving forward, whether that is through providing an online option, making adjustments to what takes place in brick-and-mortar schools, or providing hybrid learning options for these students.

## Recommendations for school leaders and policymakers

Prior to the COVID-19 pandemic, Tyack and Cuban (1995) observed that many reforms in education were untenable due to a lack of buy-in from teachers. During the pandemic, teachers experienced unprecedented change and demonstrated great flexibility in navigating new challenges. Teachers will need to continue to be more open to change if this is going to be a moment when that happens. However, with such high burnout levels, this may be the perfect opportunity for change to occur as teachers may welcome changes that decrease the workloads and support teacher well-being. It is important for school leaders and policymakers to find ways to reduce the additional burden placed on teachers during the pandemic as part of a strategy to retain talent

in the classroom. However, given the learning loss of recent years (e.g., Halloran et al., 2021), making the job of a teacher “more doable” cannot mean reducing rigor or instructional standards. Educational leaders must be tactical moving forward as the educational profession is at a critical fork in the road. Schools have the opportunity to continue to implement some of the changes made during the pandemic, but also must be aware of the burdens put on teachers.

Though the pandemic forced teachers to make changes to their classrooms unlike any they had made before, some of these changes may be here to stay and may have the opportunity to improve today’s classrooms. One of these changes included the use of one-to-one technology access for students. Several previous studies found teachers who increased the use of technology in the classroom saw increases in student achievement and engagement (Hull & Dutch, 2019; Kaufman & Kumar 2018; Markett et al., 2006; Zhai et al., 2018). For example, Hull & Dutch (2019) found one-to-one laptop programs increased student math scores and Zhai et al., (2018) found the use of mobile devices increased student perceptions of learning physics. It is important that school leaders and teachers understand that technology-based pedagogical interactions can produce positive results when goals are set for its use, teachers are prepared to implement the technology, and students are engaged and motivated to learn (Kim et al., 2019; Lee 2012; Liang et al., 2012). School leaders must also understand that technology in the classroom may also lead to some instructional drawbacks. For example, Kim et al. (2019) found teachers struggled with completing the required curriculum when integrating technology into instruction. This may be a prevalent challenge for today’s teachers as teachers attempt to balance addressing student learning loss and current grade-level standards; however, it is possible that this challenge might not be as great now since the pandemic forced all teachers to rely more heavily on technology for their instruction. Overall, the technology implemented during the pandemic can be seen as a positive aspect of instruction. It can lead to a more engaging environment for students, and an increase in student collaboration, motivation, and self-regulation (Kaufman & Kumar, 2018; Markett et al., 2006).

Another positive change may include the use of hybrid instruction. Because of studies conducted throughout the pandemic that provided teachers’ perspectives on hybrid instruction (e.g., Pressley, 2021b; Pressley et al., 2021), we caution against the use of hybrid instruction as normal, everyday practice. Specifically, we believe hybrid instruction would be best for specific situations such as if a student is unable to attend in person (i.e., sick for an extended period) or for students who may have more success in a non-traditional environment (Shaw & Shaw, 2021). This approach would not require teachers to develop a new lesson plan for students but allow a student to join the day’s lessons virtually.

During the pandemic, many schools and school districts included some asynchronous instructional time during the school week (Love & Marshall, 2022), often making one day per week asynchronous (e.g., “asynchronous Wednesdays”). During this time, teachers met with students who needed additional help, planned lessons in multiple formats, and caught up on paperwork and meetings. Teachers surveyed in May 2021 indicated that they believed this was the change that was least likely to persist beyond the pandemic (Marshall et al., 2022c); however, this was probably neces-

sary for many to weather the crisis - particularly during the 2020–2021 school year (Marshall et al., in press). Finding ways to formally schedule additional professional planning time for teachers in a post-pandemic world might be one way to reduce burnout and increase morale.

A traditional school is not always the best option for all students. Providing students and parents with a virtual option allows a student to receive instruction from a certified teacher and state developed curriculum. For example, Virginia has implemented a virtual school option for all students that includes the same curriculum as students attending in person with state certified teachers. By providing a state certified program, school leaders can ensure all students are receiving a high-quality education regardless of format. Online learning does not need to be a full-time option. Prior to the pandemic, as many as three-quarters of school districts allowed their brick-and-mortar students to enroll in online courses, either for credit recovery or for course options not available to them in their school (Powell et al., 2015). Kingsbury (2022) found that among parents whose children were not afforded online course options in secondary grades, more than half wished the option existed for them. The COVID-19 pandemic represented the greatest experiment in online learning that has ever taken place. Expanding access to full-time and part-time online options for students for whom it works should be a priority for policymakers and school leaders moving forward.

With the changes brought on by the pandemic and discussed in this paper, school leaders must be careful not to overwork teachers by implementing changes and must find ways to also support teachers with changes moving forward. Support might come in several forms, such as providing professional development on the implemented changes and modeling different ways teachers can implement the changes into their classrooms. Professional development that provides teachers with opportunities to receive feedback from more experienced teachers and connect to their classrooms may increase teacher self-efficacy in implementing changes (Fackler & Malmberg, 2016; Morris & Usher, 2011; Yoo, 2016). Additionally, school administrators must step up to provide support at the school level through formative feedback and providing needed resources for teachers (Hoy & Woolfolk, 1993; O'Connor & Korr, 1996; Ross & Bruce, 2007).

School leaders must understand teacher workload and the current state of teacher morale and burnout (e.g., Pressley et al., 2022). Teachers are in a very fragile place and asking teachers to add more to their busy workloads may push more teachers to leave the profession. For the last two years, teachers have worked on the front line of the pandemic and are now tasked with expectations of raising student achievement, supporting students' behavior and mental health within the classroom, all while teaching grade level standards. School leaders must have some grace with teachers and provide appropriate resources to support students within the classroom room. However, it is important that school leaders do not make these supports an additional set of requirements, adding one more aspect to teachers' busy schedules. Rather, they should provide resources as options for teachers to use when needed. In addition, school leaders can work to provide more support for teacher well-being through dedicated teacher workdays, supporting teacher mental health, and working to raise teacher pay.

The COVID-19 pandemic had a major impact on the world, but especially on the education system and teachers. New technology and instructional approaches were introduced to the education system that may have a positive impact on future learning. However, teachers are currently feeling burnout and low morale. Because of this, school leaders should not just focus on the positive changes for students, but also on the teachers as the world moves toward the endemic phase of COVID-19.

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