Coming out of Covid: Student Learning Before and After

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In March 2020, the world changed drastically, with very little warning and very little time to transition. I was a part time instructor at Space Center Houston about to start training for our Atmospheric High School program when we were told to grab a computer, given usernames and passwords, and told to start copying as much information as we could from our onsite server to Sharepoint. When our shift was done, we were sent home with a computer, not to return onsite for three months – the entire museum shut down for the Covid-19 pandemic.

When we returned in limited capacities a few months later, I noticed it seemed that students struggled a bit more, their social skills were off, and things didn't seem like they were before. Fast forward two and a half years later, the last of our programs are finally returning to pre-Covid numbers since most students participating in this program were international students.

Since I am not in a traditional classroom, I do not see the same students day after day for 9 months, I see them for a week unless they return to our program. So I do not have as good of a baseline to see how the pandemic has affected students academically and socially. So what outcomes have researchers seen as a result of the shift in learning environments?

Several outcomes have been reported, with differing results. One study from 2013 indicated students would experience problems while being separated from their peers. "A study by Sprang and Silman (2013) found that children who were isolated at home during previous pandemics were more likely to experience stress disorder, grief, and adjustment problems" (Skar et al., 2022, p. 1554). Klotsky et al's (2022) research would concur. "When schools only offered remote learning, many parents and school personnel reported a decline in academic behavior such as lower attendance (defined as not logging onto the educational platform), less participation in classroom activities, and completion of schoolwork" (Klosky et al., 2022, p. 660). This was confirmed by both parents and school personnel reporting learning losses.

This isn't just unique to the United States. A study of students in Norway found similar results. "When compared with first grade students in the same schools a year earlier before the pandemic began, first grade students educated during the pandemic and the emergency remote instruction evidenced statistically significant lower outcome for writing" (Skar et al., 2022, p. 1563). This was even after they considered the size of the various schools, teachers including special ed teachers, student genders, and native languages. However, their findings were not all negative as they found that students' attitude toward writing had not changed.

Kleinke and Cross studied the effects of hybrid versus remote learning. "Our findings from this first part of the analysis indicated a significant difference between the two learning environments (fully remote and hybrid) that were employed during the pandemic" (Kleinke & Cross, 2021, p. 189). With hybrid learning, often the flow of the day, the expectations, and overall class experience was in flux. "Once gradually returning to in-person learning, educators were faced with difficult decisions about how to best balance the constantly changing public health guidelines, parent expectations and student needs, which often resulted in schools offering learning simultaneously in different modalities (Kleinke and Cross, 2021)" (Kleinke & Cross, 2022, p. 259). This unstable environment combined with the student's skills developmentally are what Kleinke and Cross believe to be some of the reasons for the difference in learning between remote and hybrid, although they do admit their findings do not match up with other researchers' findings (2021, 2022).

The lockdown didn't affect all students equally. "Students with disabilities and/or learning differences, students for whom English was a second language and their parents spoke Spanish only, and unmarried/un-partnered essential working parents, all experienced additional struggles with remote learning" (Klosky et al., 2022, p. 661). Many students would have to share technology with siblings, if it was available at all, not every home had broadband internet, and when parents would have to work, sometimes it would be older siblings watching younger siblings. "Parents and school administrators frequently cited lack of community internet/Wi-Fi access, absence of digital devices, and/or low technology literacy as barriers to virtual learning" (Klosky et al., 2022, p. 660)

The age of the student may also impact their success rate, with younger students more at risk. "Younger learners may find it more difficult to be in a remote environment and require additional help with technology from parents who are not always able to be with them throughout the learning process" (Kleinke & Cross, 2021, p. 180). They go on to explain that the hybrid learning environment "negatively affected student achievements both in Math and ELA for students at or below 6th grade" (Kleinke & Cross, 2022, p. 273). However, they did note that the hybrid learning didn't have as large of an effect on older students.

The good news is that some of these negative effects have been rolling back. "When students returned to in-person school, parents reported improvements in school participation, school performance, and children's general mood. However school personnel reported that children still demonstrated learning delays, and some behavioral differences were noted" (Klosky et al., 2022, p. 661). There are many ideas for next steps to take to make up the ground some students have lost to bridge achievement gaps. However, the scope of this paper was simply to observe and report – further research would be needed to make suggestions.

References

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