Teaching in a High School
Adaptations, Effects, and Opportunities

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"I miss you guys. I miss everyone so much!" These are the words of an adolescent, an only child, in tears at the end of one of our regular Zoom classes, in a home full of fear and friction. This student lives with a single parent who survived cancer and a debilitating cancer treatment, and who is at a higher risk of death should COVID-19 find its way into their home. As it is for all of us, this family's routines are disrupted, and they have unfamiliar practices and habits to learn, ones that just might mean the difference between life and death, at a time when expert advice seems to change week by week. Is it ethical to ask this student to have to fully focus on school work?

Adaptations

1. We wrestled with questions like the one above and with many others. What schedule would we use? How much work would we or could we assign? What kind of work? How much flexibility should we or could we have? We adapted and readapted. We left our school building on Friday, March 13, 2020, and we began to teach remotely in all academic courses on Monday, March 16.

2. Many of us already had Google Classrooms established. We beefed these up with links and videos and established new Google Classrooms for courses that had not previously had them.

3. Many of us recorded short video or audio introductions to topics in history and literature, in lieu of longer, in-person lectures, and then we focused our Zoom classes on discussion.

4. We quickly made all courses other than seminar ("morning lesson") optional. Some families, for instance, had a single, slow internet connection for several children and two parents who were trying from home to keep their businesses alive.

5. We postponed Organic Chemistry to the fall, and substituted an Introduction to Psychology course. Studying psychology during a time of psychological stress, anxiety, and depression made sense, and lab work just wasn't possible.

6. We graded all courses pass/fail by default, giving grades only to students who requested them.

7. We moved, in general, from daily assignments to weekly projects.

8. We took Spring Break early in order to regroup. No one was going anywhere anyway.

9. After Spring Break, we added remote art courses, weekly projects based on materials students already had in their homes. The most popular of these was participation in a Getty Art Museum Quarantine Challenge, in which participants used materials found in their own homes to recreate tableaux that reproduced a work from the Getty collection. Art teachers met with students remotely to discuss their projects, and students submitted photographs of their work online.

10. After Spring Break, we added a Morning Meeting by Zoom each day. Students, parents, and teachers joined a Zoom conference to hear a poem and to recite the morning verse. Students and teachers volunteered to read poems that they loved or that they found meaningful. We collected these poems into a booklet that was sent to each family at the end of the school year.

11. As the spring moved forward, we cancelled a week-long hike, a surveying course, an astronomy course, overseas travel, chorus, physical education, spring sports, the spring play. Probably other things that I'm forgetting. All of a sudden, none of these activities was allowed, lawful, or prudent. Because of these cancellations, we ended the school year a week early—why prolong hours in front of a screen when the weather is great and the academic credits are accounted for?

12. We held our year-end assembly by Zoom. Five candles burned on one laptop screen—one for each class in the school, and one for the school itself. Each member of our core faculty spoke movingly to one class or another, after which we extinguished that class's candle, signaling the promotion of its students to the next grade. We did not, though, extinguish the school candle. We recorded the assembly and made it available for grandparents and other friends and family members to see. While we kept the recorded assembly private through a

secured link to the site, it has been viewed almost 500 times in a community of 50 students. Strange to say, it is now the assembly with the largest audience in the history of our school.

13. We also moved online our annual "Everything I Ever Needed to Know I Learned at Berkshire Waldorf High School" year-in-review quiz show. For this quiz, teachers wrote questions, for which they also provided answers, while another teacher entered these into software that kept score in real time as students, grouped in four teams, followed the quiz on laptops and answered the questions via a cell phone app. Team names? The cardinal virtues: Fortitude, Patience, Justice, and Temperance.

14. We made a ten-minute video slideshow honoring our graduates, obtaining childhood photos and using school photos from their years together. Two students provided original songs for the soundtrack. The seniors and their parents—and some teachers—were moved to tears, not, this time, because of loneliness and sadness.

15. We delayed graduation for almost two months in order to hold it in person, outdoors, distanced, in masks. Totally worth it.

Effects

All of these adaptations were necessitated by the vast, strange cloud of the COVID-19 pandemic. In addition to the obvious sadness, loneliness, and isolation, here's what we noticed:

1. **Cognition**

   We are beings who engage with our world through thinking, through feeling, and through will—or, as developmental psychologist Howard Gruber puts it: we use evolving subsystems of knowledge, purpose, and affect.[1] Alternatively, we can use the terms of developmental psychologist Simon Baron-Cohen (brother of the famous comedian Sasha Baron-Cohen): we switch between

Madonna and Child in a Window
Martin Schongauer; c. 1485–1490; Oil on panel

High School Junior and Teddy Bear in a Window
Linda Ripley, Class of 2021; April 2020; Staged photograph

Remote art project. Entry in Getty Museum's "Quarantine Challenge," featured on the Getty Museum Instagram account.

1 Gruber, H., and Bödeker, K., eds. (2005). Creativity, Psychology, and the History of Science. Dordrecht, The Netherlands: Springer.

epistemic, perceptual, and volitional mental states.[2] Regardless, our tripartite engagement with the world is clear.

But only one mode—call it thinking, cognition, knowledge-based, or epistemic—is privileged by a computer attached to a screen. To put it bluntly: remotely teaching in purely cognitive fields, like math or computer programming, is relatively easier than remotely teaching in fields that are multidimensional. I taught a precalculus class last spring and, with the assistance of a small whiteboard that I held up to my laptop camera, my class and I could make progress just about as swiftly as we could in person. It was less fun, with fewer digressions and explorations, fewer puns and jokes, less human contact, but it was effective.

2. **Affect**

Emotions, on the other hand, are flattened and attenuated through a screen or a phone. We can't shake hands or hug; tone of voice and facial expressions are compressed, sampled, mis-timed. The distractions of our off-screen surroundings and the fact that we don't share these make an emotional connection harder to establish and to maintain. It is possible to maintain already-established relationships remotely, at least for a while, but it is significantly harder to establish healthy, trusting student-teacher relationships when teaching remotely. Teaching, expressing love, developing an aesthetic sensibility or a comfortable or safe "space" are all much harder via videoconference.

3. **Behavior or Will**

If affect and aesthetic sensibility are harder to maintain over electronic media, teaching the violin or ceramics or blacksmithing or soldering a robot are virtually impossible. Behavior or will may be remotely affected only indirectly. I can move or demonstrate on my end; you can copy or try on yours. I can send directions; you can follow them. Or not. I can watch you move or draw and try to assist or correct with words or a demonstration. I can sing; you can sing back (singing at the same time just doesn't work with the echoes, jitters, and time delays). The will is almost beyond reach through a remote audio-video connection. It can be employed only with significant effort to cognize first and act second.

4. **Social-Emotional Health: Anxiety, Depression, Attention**

A growing number of studies suggest that "screen time" increases the risk of or contributes to developing ADHD, anxiety, depression, loss of attention span, weakened memory, and sleep pattern disruption.[3] And that's a partial list. For instance:

> Early data from a landmark National Institutes of Health (NIH) study that began in 2018 indicates that children who spent more than two hours a day on screen-time activities scored lower on language and thinking tests, and some children with more than seven hours a day of screen time experienced thinning of the brain's cortex, the area of the brain related to critical thinking and reasoning.[4]

It's hard to generalize, but these effects are generally stronger in young children, persist through adolescence, and affect even mature adults. So the unprecedented leap from classroom teaching and learning to remote, often on-line, screen-based teaching and learning in spring 2020 is not without consequences, even if the immediate consequences are not clear. Certainly, our students expressed and demonstrated their ongoing challenges with anxiety, depression, and maintaining attention.

5. **Inefficiency**

Students generally learn more slowly or master less content in the same time when their education is conducted remotely; fatigue and inefficiency are real. For instance:

> Jessica Heppen and colleagues at the American Institutes for Research and the University

2 Baron-Cohen, S. (1995). Mindblindness: An essay on autism and theory of mind. Cambridge, Mass: The MIT Press.

3 Here's just a small sample of relevant studies and reports:

"Screen-time is associated with inattention problems in preschoolers: Results from the CHILD birth cohort study" – https://journals.plos.org/plosone/article/comments?id=10.1371/journal.pone.0213995

"Association of screen time with self-perceived attention problems and hyperactivity levels in French students: a cross-sectional study" – https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4769424/

"Television and Video Game Exposure and the Development of Attention Problems" – https://pediatrics.aappublications.org/content/126/2/214

"Impact of Singular Excessive Computer Game and Television Exposure on Sleep Patterns and Memory Performance of School-aged Children" – https://pediatrics.aappublications.org/content/120/5/978

"How the Internet may be changing the brain" – https://www.sciencedaily.com/releases/2019/06/190605100345.htm

4 "What Does Too Much Screen Time Do to Children's Brains?" – https://healthmatters.nyp.org/what-does-too-much-screen-time-do-to-childrens-brains/

of Chicago Consortium on School Research randomly assigned students who had failed second semester Algebra I to either face-to-face or online credit recovery courses over the summer. Students' credit-recovery success rates and algebra test scores were lower in the online setting.[5]

Opportunities

In this vast, strange cloud, there were also silver linings.

1. The scenario with which I began the article is real. The anchors of cognitive engagement, of the struggle to maintain relationships with teachers and peers even through a phone and a screen, and of having a schedule and a structure and something to do, meant a lot to this student, who would have had an even harder time without them. Something is often better than nothing. A mediated, attenuated experience is better than total isolation.

2. A few students thrived on greater isolation and more project-based learning. Those few who multitask easily, who are less distracted or distractible in their own bedrooms than in a classroom, who seem less interested or who are stressed by adolescent social interactions, saw their work improve. I would say this improvement applies to about two of our roughly fifty students. More students, to be clear, did not improve, and virtually disappeared—missing or avoiding Zoom calls, claiming—who knows what's true?—that their video was broken, that their connection failed, or that their internet was down.

3. Our school is in a rural part of Massachusetts, so most students can easily spend time outdoors. Cows still need to be milked, horses groomed and exercised, gardens tended, birds watched, trails hiked, rivers rafted, and roads ridden. A gift of fewer, shorter classes, albeit remote, and no commuting time, was the possibility of time outdoors. Students also just had more time: time with their families, time for reflection. They could help cook and clean and care for younger siblings. They could read. More than one student got a job or apprenticeship for the spring in carpentry or auto mechanics. (Students could also abuse unstructured screen time and video games, of course.)

4. Further, students could suffer boredom and have to develop a kind of inner strength to overcome it. Regardless, they had an opportunity to become inwardly more self-reliant at an earlier age because of their isolation. That seems a small reward, but, possibly, it will pay off well for them in the unknown futures that they will face.

5. Finally, in a world that often argues for the slick, sleek values of remote interaction, let's hope these students carry with them a memory of what that isolation has really been like. Let's hope they have learned first-hand, and consciously, the value of human relationships.

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5 Susanna Loeb, "Students who struggle will likely struggle more online" https://www.edweek.org/ew/articles/2020/03/23/how-effective-is-online-learning-what-the.html. See also "The Struggle to Pass Algebra: Online vs. Face-to-Face Credit Recovery for At-Risk Urban Students," in the Journal for Research on Educational Effectiveness (volume 10, issue 27, 2017); https://www.tandfonline.com/doi/abs/10.1080/19345747.2016.1168500