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To cite this article: Curtis J. Bonk (2020) Pandemic ponderings, 30 years to today: synchronous signals, saviors, or survivors?, Distance Education, 41:4, 589-599, DOI: [10.1080/01587919.2020.1821610](https://doi.org/10.1080/01587919.2020.1821610)

To link to this article: <https://doi.org/10.1080/01587919.2020.1821610>



Published online: 27 Sep 2020.



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REFLECTION



Pandemic ponderings, 30 years to today: synchronous signals, saviors, or survivors?

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ABSTRACT

The mandate for K-12 and higher education instructors to teach online during the COVID-19 pandemic resulted in a wide range of experiences, preferences, challenges, complaints, and successes; especially in terms of synchronous forms of instruction. For much of 2020, many educators hesitantly and nervously transitioned to online environments while praising synchronous tools like Zoom as professional life saviors. At the same time, other instructors were admittedly in survival mode and struggling to cope with an array of online learning technology tools and features. Fortunately, many others grasped the assorted synchronous signals urging them to experiment with their instruction such as inviting expert guests and incorporating global and multicultural education. No matter the perspective, there remains a need for the rapid deployment of tutorials, best practice videos and scenarios, professional development programs, and other guidance for synchronous as well as asynchronous instruction.

ARTICLE HISTORY

Received 2 August 2020
Accepted 7 September 2020

KEYWORDS

synchronous conferencing;
multicultural education;
COVID-19; blended learning;
remote teaching; distance
education

Introduction

Education has been rocked since the COVID-19 pandemic left the world community with a huge and growing quandary during the first quarter of 2020. Since the onset of the pandemic, more has perhaps been written and debated about the viability and applicability of distance education resources, pedagogical methods, and associated technologies than the combined history of distance education prior to 2020. Seemingly in an instant, face-to-face (F2F) instruction was no longer the dominant and the most comfortable form of educational delivery. To deal safely and innovatively with this unique situation, alternative instructional approaches and solutions had to be established.

While the sudden embrace of learning remotely from traditional four-walled settings is complex and multifaceted, this particular reflection is primarily concerned with the use of synchronous instructional technologies and pedagogical approaches among educators who have transitioned from conventional educational settings to some form of distance or hybrid approach. The primary audience, therefore, is not instructors who have been teaching at a distance for some time nor is it administrators at fully online institutions which have been delivering instruction with assorted technologies and pedagogies for learning at a distance for one or more generations. Those

instructors and administrators already adept in the distance or online learning space are highly familiar with most of the issues, challenges, and questions presented in this manuscript. Nonetheless, they should contemplate what the sudden exodus from F2F instruction signifies and suggests. Just what does the torrent of institutions and organizations suddenly forced to rely on various types of remote learning options mean in the near and far term?

As discussed below, the tools for learning in a synchronous environment have existed for decades in various formats. First, there were experimental technologies for online collaboration, writing, discussion, and document sharing, and later various chat and videoconferencing systems emerged. For those located at a distance, videoconferencing technology enabled a rich synchronous experience that could foster global and multicultural education (Lee, 2004, 2007; Lee & Bonk, 2013). Unfortunately, most instructors did not have opportunities to teach with such tools before the onset of the current pandemic; as a result, synchronous conferencing teaching methods have remained relatively new territory in K-12 and higher education settings.

Synchronous signals

For over 3 decades, I have been on a quest to find ways to foster greater interpersonal understanding and perspective taking among my students using different technology tools (Bonk & Sugar, 1998; Riel, 1992). In 1990, when I was housed at West Virginia University, my doctoral student, Padma Medury, and I set out to catalog all the collaborative writing technologies we could find (Bonk et al., 1994). The dozens of tools that we reviewed were key components of early learning management systems that would arrive in the mid- to late- 1990s. When my research team at Indiana University and I began testing and comparing the collaborative technologies we had cataloged, we discovered vast differences in the student interaction patterns and outcomes of synchronous and asynchronous technologies (Bonk et al., 1998).

In the spring of 1995, my Indiana University colleagues and I successfully linked two videoconferencing systems together, CU-SeeMe and PictureTel, to bring scholars whose articles we were reading into one of my classes in a synchronous fashion while simultaneously debating those articles asynchronously in VAX Notes (Bonk et al., 1996). The goal was to use technology to share knowledge, foster intersubjectivity and mutual knowledge, and stimulate new understandings and perspectives (Riel, 1992, 1993). In effect, this was an early experiment with a technology-driven cognitive apprenticeship or *tele-apprenticeship* (Levin et al., 1987; Levin & Waugh, 1998) that contemporary technologies can foster relatively seamlessly in 2020.

Throughout the 1990s and 2000s, the various forms and features of synchronous technology expanded; however, pedagogical attempts to thoughtfully use them often suffered from access, bandwidth, and cost issues. By the mid- to late-1990s, higher education instructors began to use AOL Instant Messenger, Yahoo! Messenger, ICQ (i.e., "I Seek You") (Angwin, 2000; "ICQ," 2020), and other instant messaging tools for office hours, team project meetings, guest expert chats, and even synchronous forms of testing and evaluation. With digital access to expert guests, students could be inspired by some aspect of a discipline through relatively brief windows into research projects and initiatives occurring at the other end of the world. Even with simple chat technology, important

signals of what the current state of knowledge of a field was could be delivered by one or more experts to one's students in a timely and cost-effective manner.

In the late 1990s and throughout the 2000s, synchronous conferencing technologies became increasingly complex and powerful with video sharing, multimedia presentations, real-time polling, live annotations on slide images, and chat options. The popular synchronous technologies at the time had names such as Centra, PlaceWare, WebEx, and Microsoft's LiveMeeting ("Web Conferencing," 2020). Unfortunately, using such systems often went beyond the budgets of those in school and higher education settings. Then Elluminate (now Blackboard Collaborate; "Elluminate Live," 2019) as well as Macromedia Breeze (now Adobe Connect) emerged and began to cater to the education market.

As that happened, there were many signals that such technology served a vital role in online instruction; primarily as a tool to deliver and record lectures, hold group discussions, analyze documents and case scenarios, and connect with experts or guest instructors around the planet. In 2013, my colleague Mimi Lee from the University of Houston and I published an article on how such conferencing technology expanded traditional notions of "the classroom" (Lee & Bonk, 2013). We detailed how videoconferencing can be used to reveal the cultural norms and lifestyles of people from different countries (Lee, 2004; Lee & Hutton, 2007; Veletsianos & Eliadou, 2009). In effect, the promotion of intercultural education sought to foster cross-cultural awareness, shared understanding, perspective taking, and respect; though, as Lee (2006, 2007, 2010) has repeatedly noted, there remained many cultural, social, and pedagogical limitations and challenges with such technologies and approaches. Nevertheless, we saw signals in these projects that synchronous technology had immense potential for building human interconnectedness and perspective taking. Veletsianos and Eliadou (2009) even explored how innovative and learner-centered pedagogical approaches with such technologies could help foster world peace.

Synchronous saviors

The above is a partial history of synchronous technology over the past few decades (see Lee & Bonk, 2013, for more ideas and examples). Unfortunately, a minority of educators being "forced" to teach online in 2020 realize the degree to which synchronous conferencing played a role in learning across educational sectors and age groups in the past. Most of them only know that tools like WebEx, Zoom, Kaltura, Skype, GoToMeeting, Microsoft Teams, and Google Meet (Graham, 2020; Hughes, 2020; Verbrugghe, 2020) "saved" their semester. Though Zoom has been around for nearly a decade ("Zoom Video Communications," 2020), the majority of its users were added in just the past 6 months in a literal "Zoom Boom" (Flaherty, 2020). Despite the general lack of knowledge of the field of distance education, synchronous technology was suddenly deemed reliable enough from decades of testing and development that entire schools, colleges, and universities could transition to it with limited notice. It is amazing that a technology that continued to evolve over the past 3 decades with limited pick-up was so extensively and quickly deployed and utilized during the pandemic. Its societal role as temporary "savior" came unexpectedly and swiftly for many.

But what was actually saved by Zoom and similar distance learning tools and systems? Despite many online experiences and classes deemed complete failures during the past few months, such technologies no doubt saved many academic programs from being

disbanded and numerous careers from being halted, at the very least, temporarily. In the process, the educational capacities brought about by synchronous forms of learning arguably saved the reputation of colleges and universities around the world and kept them from financial ruin. In addition, educators, especially those who were early in their careers, were afforded distance teaching options and opportunities that they might not otherwise have ever had. At the same time, those about to retire could enjoy teaching one final semester; albeit from their home offices and kitchens, thereby making it a potentially challenging final act. Needless to say, many students were also rescued by Zoom as were myriad staff members of thousands of educational institutions and organizations.

While Zoom and other synchronous tools received most of the attention, there were options. As some have astutely pointed out, other forms of remote learning were made possible by simple photocopying and printing paper packets as well as offering educational radio and television (Kanwar & Daniel, 2020; Miks & McIlwaine, 2020; Richards, 2020; Theirworld, 2020); all of which are reliable instructional approaches with rich histories (Moore, 2007; Moore & Anderson 2003; Moore & Kearsley, 2012; Wedemeyer, 1981).

Despite such remote learning options, Zoom assumed its place, at least for now, on the educational technology throne. As Hersh (2020) from Northwestern University observed, with Zoom, entirely new forms of communities were created through synchronous means during the pivot. In fact, he felt that teaching with Zoom and other synchronous technologies could, in fact, become “first-rate” (Hersh, 2020). For Hersh, such high-quality synchronous instruction meant hearing from more students’ voices and less from the instructor(s), relying on small groups in breakout rooms, using variety in structuring synchronous sessions, displaying enthusiasm and excitement for learning this way, and continuing to evolve one’s pedagogical approach.

Like Hersh, Toor (2020) from Eastern Washington University also found the above techniques worked to build community in Zoom; additionally, she suggested nurturing ample peer feedback, scheduling one-to-one meetings, sending personal emails to check in and make recommendations, and meeting synchronously at the times that were previously scheduled for face-to-face or residential instruction.

Some teachers focused on accommodating different student needs in the early days of the pandemic. Hogan and Sathy (2020), for instance, created an advisory list for embracing student diversity and attempting to be inclusive of all students. In addition to the ideas from Hersh and Toor listed above, they noted the importance of considering how one starts and ends synchronous sessions, such as having students post the muddiest or most unclear point in the chat window before exiting the session (in terms of the latter, I personally like to have students post three words to describe the session at the end). To make online instruction inclusive, according to Hogan and Sathy (2020), it is vital to make session resources available asynchronously for students who missed the session, including any video or audio files.

Finally, writing in *The Chronicle of Higher Education*, Whitaker (2020), who had resisted technology integration in the past, attempted to create online experiences that honored the various accommodations that her students needed. At first, she did this with extensive supplemental digital resources such as shared online videos found in YouTube, the Khan Academy, and TED Talks. Additionally, she offered students reading guides, access to presentations with narration, extra time on tests and assignments, readings in multiple formats, and recordings of her synchronous sessions. In terms of synchronous learning,

Whitaker mentioned that she is committed to an extensive list of adjustments for the fall 2020 semester including the use of the breakout rooms in Zoom for small-group activities as well as polling activities for quick student feedback. She also advocated for attempting to identify struggling students early in the course as well as relying less on lecturing and more on responding to questions from students, using peer review with rubrics, and presenting mini lessons during active office hours. In the coming semester, Whitaker will use a range of other techniques including sharing assignment rubrics and templates and making available online tutorials.

Synchronous survivors

Across all educational sectors, thousands of teachers and trainers were forced to muddle their way through weeks or months of online instruction after F2F classes were dismissed in the late winter and spring of 2020. Some educators described how exhausted they were by the seemingly endless sessions in Zoom (Blum, 2020; Cohn, 2020). Such fatigue could result from attempts to maintain high-quality class conversations and foster successful team collaboration as well as from the ever-present bandwidth interruptions (Schroeder, 2020) and the time spent supporting a sea of panicked students (Popescu, 2020). At the K-12 level, assorted teachers incorporated gaming activities, sang songs, danced on screen, held donut eating events, and used Oreo cookie stacking to teach math facts (Richards, 2020).

In the midst of all these stories, we were reading that “online learning is not the future. Never was. Never will be. It’s just not what students want” (Herman, 2020). Such statements, in effect, imply that all you need to do now is survive the temporary use of online learning. Conversely, we also were learning from Darby (2020) at Northern Arizona University that online instruction is here to stay. Of course, if Darby is correct, we can no longer simply survive these remote learning times.

At the start of the massive pivot, educators sought advice from numerous sources just to survive. They participated in webinars, watched tutorials, attended meetings, and browsed the online classes of colleagues (Popescu, 2020). To help in this regard, *The Chronicle of Higher Education*, *The Conversation*, *The Evollution*, *Inside Higher Ed*, *The Guardian*, *Campus Technology*, and numerous online newsletters, magazines, journals, and organizations provided a veritable barrage of online teaching and learning advice and suggestions. For instance, at the end of March 2020, Contact North contracted with Owston to provide pedagogical and security recommendations for using Zoom (Owston, 2020). In June, Veletsianos (2020) published a useful overview of the key elements in an effective online course. A month later, Mintz (2020) reminded us of the dozens of ways in which online learning can be designed to be more meaningful and engaging, such as through online concept mapping, data visualization, annotations, debates, and team communication and collaboration.

Despite all the advice in the air, most remained unaware of these pedagogical techniques as they were focused on surviving an onslaught of student questions and concerns. Certainly, there is some sense of camaraderie in the notion that all parties have struggled to some degree with the pivot to remote teaching (Lederman, 2020). But did everyone struggle? What did they struggle with? And what is the meaning of pivot in a course that already was fully online or at least heavily blended? What percentage of instructors felt

they were truly pivoting? Personally, I found the transition relatively seamless, and it seemed to occur at an almost perfect time in the semester; that is, after we all knew each fairly well from 9 weeks of F2F instruction.

In addition to the “what” questions above, some “why” ones ran through my brain. Why do people assume the worst of distance education? Why must online learning be a struggle and something to simply survive? Why must online or distance education connote something inferior or dangerous and a remote thing that we do only in extreme emergencies (Hodges et al., 2020)? Why are instructors relying on “silly games,” “interspersed goofy antics,” and donning costumes to maintain students’ attention (Richards, 2020)? Why must online learning remove the chance to learn from one’s peers (Herman, 2020)? And why has there not been more uptake of alternative pedagogies such as authentic e-learning (Herrington et al., 2010) or project-based learning (Koh et al., 2010) despite decades of strong research showing such methods to be effective?

Perhaps, as Levander and Decherney (2020) have pointed out, the one lesson that was most apparent in shifting the world population from physical classrooms to virtual spaces, was the overriding importance of the human dimension when teaching from remote places, not the particular technological tool or system chosen. As an example, while generally pessimistic about the long-term possibilities of online instruction, Herman (2020) admitted that he happily found that Zoom restored some sense of the human connectedness that occurs in F2F classrooms. If synchronous can foster a sense of connectedness and community, what will be the next phase in the evolution of synchronous instruction? Whatever it is, the pandemic has most certainly kick-started it.

Keep in mind that the above noted struggles and challenges with synchronous instruction assumes that sufficient resources, technological infrastructure, and guidelines exist. Much of the world lacks access to such real-time technology, however. Additionally, instructors might lack proper awareness of, or training in, synchronous instructional technology features and pedagogical approaches. Even when all that is in place, students may have to compete with their siblings as well as stay-at-home parents for technology access, Internet bandwidth, and adequate workspace conducive to effective learning from their homes.

Stated another way, for myriad reasons, the 2020 pivot was not universally successful. As my colleagues and I recently detailed in an edited book, while the educational infrastructure, policies, and practices are improving, unfortunately, for millions of people in the Global South, huge disparities, challenges, and issues remain (Zhang et al., 2020). With around 1.6 billion children around the world being impacted by COVID-19 (Miks & McIlwaine, 2020; United Nations, 2020), millions have had to turn to radio, TV, printed packets, and other more traditional study-at-home methods (Kanwar & Daniel, 2020; Theirworld, 2020). Hence, for those with limited technology access, synchronous technology has not been a signal to powerful global education opportunities. It also has not been a savior for the various educational predicaments produced by the pandemic around the world. And, for far too many, it is not even a viable tool for the educational survival of petrified instructors. Clearly, for a large swath of the world population, synchronous instruction remains out of reach, and its proponents are simply out of touch.

Concluding ideas and next steps

As detailed at the start of this reflection, the world has gone into a frenzy ever since the COVID-19 crisis broke and schools and universities were forced to temporarily close down and then offer all instruction at a distance. This distance learning mandate was a new and challenging world for educators who had long resisted anything not offered in a face-to-face or residential campus setting. In the process, the term *remote teaching* was the term selected by many to describe the situation. For some, this was a deliberate attempt to distinguish it from rigorous or well-planned online learning as often practiced by experienced online educators and institutions with a rich history in fully online and blended learning approaches. Alternatively, others used the term since they were unaware or ignorant of the long history of distance education, including many decades of practice with correspondence types of courses, and, more recently, with online and blended forms of instruction. Given the general lack of acknowledgment of the historical contributions that those in the field of distance education have made prior the outbreak of COVID-19, it is now time to begin to educate the populace on this vast and rich field.

Clearly, how we view this flurry of synchronous instruction brought on by the COVID-19 pandemic, depends on our sense of history of the field and prior involvement and investment in such forms of instruction. Instead of viewing synchronous technology as some sort of life savior or teaching with it as a test in human survival training, there is a pressing need to change the pervasive mindset of these times as “emergency remote teaching” (Hodges et al., 2020) to something like “rigorous online learning” (Manfuso, 2020) or effective and robust teaching. It is vital to keep in mind that such environments are adapted to swiftly changing local contexts each with its own idiosyncratic resource availability issues and training and support needs (Hodges et al., 2020).

Educators might view the synchronous signals in the air as an invitation to experiment with their pedagogical practices. Perhaps it is time to employ collaborative teams with the use of breakout rooms for discussion and interaction. Additional steps toward engagement might include using embedded polling or offering learners greater voice through activating online chat and question and answer tools. From my vantage point, the continuing pandemic is a chance to use tools like Zoom, Skype, and Microsoft Teams for global collaboration and interaction of one’s students with experts in the field or perhaps with program alumni that instructors have been too shy to contact in the past. As the widespread racial and social injustice marches and protests of 2020 make evident, the time is ripe for societal experiments in global education involving the rich sharing of ideas and perspective taking.

In addition to educators grabbing hold of these synchronous technology trends, researchers and graduate students might see the smoke signals rising above the field as a grant or research opportunity. Some of them might craft white papers, research reports, or reflection pieces like this one. At the same time, administrators might glance at the same signals and realize that it is time to allocate more resources to distance education, including synchronous training programs and lifelong education initiatives while charting the road ahead. Prominent foundations in this space like Gates, Hewlett, and MacArthur in the United States of America as well as organizations like the Commonwealth of Learning and Contact North in Canada might sponsor the design and development of a set of synchronous instruction guidelines, training programs, and vignettes and best practices.

Although learning from a distance has continued to evolve over the centuries, there has never been a moment in the history of humankind when professional development guidelines, resources, programs, and other training initiatives were more desperately needed. For educators who have been thrown into the online teaching trenches with minimal, if any, training and support, such resources and guides may not be as important as a vaccine or other cure to COVID-19; however, they are essential to helping learners around the globe to continue to learn and develop during the current pandemic as well as during the many upcoming years of ensuing residual effects.

As this short review highlights, synchronous and asynchronous technologies for learning have significantly evolved during the past 30 years and they will continue to do so for decades to come. Maloney and Kim (2020) keenly observed that while many are overwhelmed with the issues and challenges of the current pandemic, now is the right time to imagine a learning future 30 years out and design innovative pedagogical approaches, initiatives, and entire ecosystems that move the needle toward such learning innovations and possibilities. With sufficient imagination and loads of hard work, synchronous technology will no longer be a signal, a savior, or something that must be survived. Instead, it will be a key component of a brave new world of teaching and learning across all educational sectors and generations.

Acknowledgments

The author would like to thank Tom Reeves from The University of Georgia and Meina Zhu from Wayne State University for their wonderful feedback on earlier versions of this manuscript.

Disclosure statement

No potential conflict of interest was declared by the author.

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