THE RAPID RESPONSE, INNOVATION, AND CHALLENGES OF SUSTAINABILITY IN THE TIME OF COVID-19: REPORTS FROM THE FIELD

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Setting the Stage—Digital Instruction Before COVID

In July 2020, the Evidence-Based Adult Education System (E-BAES)[1] released *COVID-19 Rapid Response Report from the Field* (Belzer et al.). It was based on qualitative interviews with 49 practitioners, including state directors, program directors/managers, instructors, and others, and a national survey that garnered 773 responses. Data were collected from late April to early June of 2020 and were used to describe how Adult Foundational Education (AFE)[2] had responded to the sudden shutdown of face-to-face programming as a result of the global COVID-19 pandemic.

The importance of describing the response at that time was due to the fact that instruction, until then, had been provided largely in face-to-face formats. There was little prior experience with offering remote live instruction or distance education using digital technology (aka online learning). Although the benefits of using digital technology in adult education to personalize instruction and make learning more flexible had been documented previously (Rosin et al., 2017; Vanek & Harris, 2020), the percentage of learners who participated in what, prior to the 2020 shutdown, had been called distance learning was just under 5 percent in the 2018–2019 program year (National Reporting System for Adult Education, n.d.; Vanek, 2022). Low utilization of digital technologies to support instruction in AFE prior to 2020 was affirmed in the survey data reported on in the *Rapid Response Report*; Most interviewees were not working in programs that had previously offered distance education, blended learning, or remote live instruction.

About a year after the Belzer et al. (2020) report was released, E-BAES task force members felt it important to learn how programs had adapted over time to the constantly changing conditions in programs caused by ongoing but inconsistent and sporadic COVID-19 infections and local policies governing public health. More importantly, task force members wanted to know what lessons could be gleaned after more than a year of remote teaching. The belief was that most programs had continued to offer instruction that leveraged digital technologies to enrich and make learning

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more flexible even as many had reopened for face-to-face instruction. Innovation was burgeoning (Eckersley et al., 2021; Kallenbach et al., 2021; Vanek, et al., 2021; Vanek & Goumas, 2021), but the belief was that a second report from the field could help highlight the opportunities and challenges to sustaining the positive changes that had been made.

In this report, we have attempted to respond to these areas of interest based on interviews conducted in 2021 with AFE practitioners. We begin with a summary of our original findings. Next, we describe how the field has continued to evolve, not just in response to COVID-19 shutdowns, but because of growing awareness that distance or hybrid modalities of instruction are options that give many learners much needed flexibility in ways to participate and that it can be effective if teachers and learners have the necessary supports. Knowing that our sample was limited and that this is a fast-moving story as programs continue to build on what they have learned, we then offer examples of innovation from research and reports that have been compiled since our data collection was completed in the late fall of 2021. We conclude with a discussion of lessons learned and ongoing challenges, not just to sustain innovation, but also to continue to work towards increased efficacy and quality. The field essentially built the plane while flying it in 2020. Now the challenge is not only to keep that plane in the air but to make its flight path clearer and smoother with time. This report is designed to assist that effort.

Responsive Change: Early Days of Remote Learning

The first COVID report highlighted changes in teaching practices, instructional tools and resources, and administrative procedures. We found that 97 percent of programs had instituted some form of remote instruction, although what that looked like varied significantly from program to program in terms of chosen learning platforms and technology tools, instructional formats, and the use of low/no technology solutions for learners who had limited or no access to digital devices and/or broadband. Programs were inventive in helping teachers make a swift transition and in reaching out to and connecting with learners in every way possible. All this effort and energy led to change so transformative that most recognized they were never going back to exactly how it was before the pandemic (Belzer et al., 2022).

The need to be responsive and to keep services going for learners by using digital technologies in many more ways than most had previously imagined possible seemed to accelerate a change that many deemed necessary but few had rushed to make. On the one hand, interviewees reported feeling exhausted by all the additional demands put on them at the start of the shutdown, including learning how to use technology to teach remotely; providing the extra caretaking of learners likely to be the most physically, emotionally, and financially vulnerable to the impact of COVID; and caring for themselves and their families. Some were resistant and left the field or did the minimum. On the other hand, other interviewees reported a sense of exhilaration. They were excited about learning new skills that enabled them to tap the potential of digital technologies in ways that could make AFE more accessible, and they experienced a sense of increased collegiality as they worked with colleagues

to figure it all out. In particular in this section, we highlight changes in the work lives of educators, access issues related to digital learning at this time, and describe how programs overcame barriers.

Impact of the Shift to Remote Learning on Adult Educators

While some programs took a few weeks to reopen and offer remote instruction or roll out their online offerings in phases, many took only a few days to transform themselves. Thanks to an abundance of professional development offerings at the program, local, regional, state, and national levels and to practitioners' willingness and ability to simply roll up their sleeves and do what they had to do in order to continue offering services to learners, teachers quickly began to learn how to use digital instructional tools for remote instruction. Many found themselves constantly learning, trying new things, and responding to feedback from learners and ongoing policy clarifications to do the best that they could under very difficult circumstances.

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The steep learning curve and the many choices and decisions required to keep up with all the changing conditions took their toll on teachers and administrators. Many reported feeling overworked and stressed; they were working far harder than they ever had before. Not only did they have to change much in their practice, but suddenly they were on call for learners in many new ways. Learners needed many additional supports to help them be able to engage and then persist in learning, and teachers and other program staff became conduits of information about many social services suddenly needed in response to quickly changing health, employment, and social conditions. Program staff struggled to keep up with the need.

At the same time, practitioners were facing their own personal challenges. These challenges included working from home for the first time, sometimes with children homeschooling, and with limited space and quiet. Many were not only supporting learners in crisis, but were also fighting their own fears, dealing with a sense of isolation, and experiencing emotional fatigue. In spite of these working conditions, some managed to feel energized and excited by their newly acquired skills and the opportunity to rethink their practices and deepen their connections with learners attained through close contact regarding many personal matters, albeit via phone, Zoom, and other digital technologies.

Access

Most programs were unprepared to become fully remote and had little to no prior experience using digital technologies. Some of the most daunting challenges they faced were related to access and use of digital technology. This challenge was widespread among learners but also experienced by some practitioners. While many lacked the necessary digital literacy skills, some also lacked hardware and broadband at home. Not surprisingly, the access gap was even wider for learners. Practitioners observed that remote learning gave many learners, who could not otherwise do so, the opportunity to participate and even flourish. However, even among those who could and were willing to use

digital technology to learn remotely, many had only a phone to use and struggled to learn on the small screen. Programs were not generally in a position to lend out devices to them.

Creative solutions were found. For example, information technology support was needed for program administrators, instructors, and learners. They borrowed it from wherever they could, such as from local school districts and community colleges where they were co-located and from in-house self-taught experts who became the go-to helpers and professional developers. Some found creative solutions for making broadband accessible. In one location, local school buses became hotspots and programs utilized their parking lots. Additionally, program staff helped learners acquire free or reduced-cost internet access when that was available. For the most part, however, everyone was stuck using whatever devices they already had. Old-fashioned solutions were also employed. For example, some instruction took place over the phone, and learners received paper packets of instructional materials delivered to their doors by program staff in some locations.

Overcoming Barriers

Barriers to remote instruction were of two types in the early days of the pandemic: (1) learner barriers to participation caused not only by a lack of access to technology but also because of financial, emotional, and physical challenges; and (2) administrative challenges caused by the change in program formats.

The day-to-day struggles of learners' lives were often magnified by the shutdown. For many, the shutdown meant a change in their work situations. Some lost their jobs, creating economic concerns and fears; others were working far more hours than normal. Family life also created barriers. Many had to contend with children doing school at home, often in cramped quarters with device and broadband access issues as already described. Not surprisingly in the midst of a global pandemic, health issues were more problematic than ever. Learners who were frontline workers were dealing with their own illness or contending with ill family members. Programs responded to these and many other barriers to participation by significantly increasing the quantity and type of learner support offered. They used a range of technology, sometimes at all hours, to offer emotional support, decrease isolation, and provide information about increasingly necessary social services including food banks, emergency supplies, unemployment services, and mental health and addiction assistance. This support and connection to other services made adult education important to learners in new ways. In spite of the extraordinary effort, programs reported plummeting enrollment with decreases from 30 to 60 percent; many learners were either unable or unwilling to participate in remote instruction.

In addition to the challenge of meeting learners' needs, the sudden change to remote instruction brought administrative challenges and the need for programs to reorganize in unanticipated ways, at first with little or no policy guidance. One of the most pressing initial challenges was the need to administer assessments that had not been designed for remote instruction. Because of this need and the fact that most learners did not have the capacity to complete quickly developed remote assessments, many programs stopped doing new learner intakes, and some developed their own new

assessment strategies. Programs found the new assessments useful for placement and hoped that they would somehow be acceptable for accountability purposes.

As remote assessment procedures came online, there were still many questions about how these would work. Additionally, programs had to reallocate funds to provide more supports for and contacts with learners, more professional development, more team teaching opportunities, new services such as food and emergency supply distribution, and more interactive web pages that were frequently updated with new information about resources including health information and social services for the unemployed and food insecure. Questions emerged regarding policy requirements and expectations that had been established related to enrollment, attendance, and learner outcomes in conditions that were no longer aligned with radically changed conditions.

In spite of the challenges, practitioners we interviewed often saw the silver lining in being forced into remote teaching. Transportation and child care issues were alleviated, and shift work was no longer a barrier to participation for those who could access devices and broadband for asynchronous instruction. Practitioners observed that some learners who had struggled to participate in face-to-face classes blossomed in the online environment. They also reported enjoying the cooperation, camaraderie, and creativity that emerged in response to the emergency circumstances of suddenly switching to online instruction, and they praised the learners who went outside their comfort zone to transition to online instruction. Almost all believed that online learning would become a permanent feature of AFE.

Evolving Toward Sustained Innovation: Settling into Remote Learning

We begin this section with an overview of programs' operating status and interviewees' outlook on how their programs were doing, overall, at the time we collected data for this report. We then turn to most of the same topics that were covered in the first COVID report: access to digital tools and broadband, intake and assessment, student participation, instruction, impact on adult educators, administrative changes, and the advantages and challenges of remote instruction.

Program Operating Conditions

When we conducted practitioner interviews 15–18 months later, operating conditions varied significantly from program to program, largely depending on the local COVID infection rates, local and state policies on reopening, differing views on social distancing, and whether borrowed spaces that had previously been used for instruction but shut down at the start of the pandemic had reopened. Some programs were still operating fully remotely; others were back to offering in-person classes, for at least some learners. Some had incorporated hybrid or hybrid-flexible HyFlex options. But no program had completely forgone remote offerings, and the general consensus was that these options would continue to be widely available. Some interviewees noted that they had come to appreciate the affordances of remote live, asynchronous distance, and hybrid modalities and could

no longer imagine teaching without them. They also understood that many learners preferred the convenience of online learning and did not want to go back to in-person classes. There was clear recognition that instruction that included at least some amount of online learning was the only option for some learners, preferred by others, and avoided by those who only wanted to participate in a face-to-face setting. As one practitioner said when talking about the growing range of options for participation, "We're trying to accommodate everyone where they are and what they are comfortable with." This goal may help cement the sustained use of digital learning tools and environments.

> "We're trying to accommodate everyone where they are and what they are comfortable with."

Among the practitioners we interviewed, there was a sense of growing confidence and competence in providing online instruction using digital platforms and tools. A teacher observed that these feelings, once well developed in her, spread to her students. She said, "As I became more confident, my students became more confident. I am an older instructor, so I shared a lot of my learners' fears, lack of digital know-how, and slow digital learning. They saw me struggle and stick to it, so I was a good model for them." A program administrator reported that their initial struggles had been overcome. "I felt like we had no idea how to do it, but now we have kind of perfected it." A program manager observed that while teachers needed significant levels of support early in the shutdown in order to use technology for teaching (i.e. "hand-holding"), "it seems simple [to them] now."

Importantly, the frantic effort and expenditure of energy that had been evident when we conducted interviews in the early days of the shutdown had dissipated. Interviewees used phrases like "war weary" and "Zoom fatigued" to describe how they were feeling, but it seemed clear that they had moved into a new phase from the initial shutdown response. They were no longer in "emergency COVID response mode" when they tried anything and everything they could quickly get their hands on to keep their programs operating and to connect with as many learners as possible. Instead of feeling like they were trying to deal with a crisis, they had begun to make more thoughtful choices about which tools and approaches worked best for specific populations. For example, one administrator came to recognize that "we weren't coming back [to face-to-face instruction] anytime soon. [So,] I started to look at the program to see what we needed to do to build an educational platform so that the students that were taking the time to come on virtually were getting something out of the program and that we weren't wasting their time to just do our hours [i.e., meet our contractual obligations with the state for Title II funds] without having an effective curriculum."

New administrative practices and questions were starting to emerge as program staff adjusted to the new reality of multiple instructional format options. Concerns included that multiple modes of instruction require more funding than a traditional approach, what new kinds of intake and assessment information were required to identify digital learning needs and interests, and what new practices and formats should be sustained through the use of digital tools and online environments even as students return to the in-person classroom.

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Access

In spite of significant progress evident in the growing confidence in and clear understanding of the importance of online learning, three major issues reflecting equity in access continued to plague programs and learners as the pandemic wore on: access to devices, access to internet, and digital literacy skills of both learners and staff. As a way to maximize responsiveness, many programs added questions to their intake process to understand learners' needs in these areas. In general, programs continue to try to maximize accessibility in whatever way possible as they increasingly understand the issues for learners.

■ Access to Devices

The issue most frequently cited by interviewees was access to devices. Many learners who could not afford them were simply left out from otherwise free virtual adult education, by default widening the digital divide. Recognizing that most learners had to depend on smartphones and lacked easier-to-use devices, many program staff who were interviewed indicated that they had eventually been able to use existing (or attain new) funds to buy and then lend out laptops and tablets. Colleges, universities, school districts, libraries, and community providers identified funding for this. Drawing on partnerships formed to take advantage of the three waves of federal relief funding, Coronavirus Aid, Relief, and Economic Security Act (CARES), the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA), and the American Rescue Plan Act (ARP) and funding from private sources, thousands of laptops were purchased and distributed to adults. Accomplishing this often took finesse, however. For example, a community-based program director turned to partnering with a local school district to get used but serviceable Chromebooks for learners, with the caveat that learners who attended 50 or more hours in the program could keep the Chromebooks. Some programs asked for a small deposit that would be refundable if the learner returned the device, while other programs incentivized persistence allowing learners to keep their devices after a certain number of instructional hours or if they passed significant tests.

> **3 COMMON ACCESS ISSUES**
> - device access
> - internet access
> - digital skills

Providing adult learners with devices often also meant figuring out how to support the devices, keeping "them up to date and operating," according to one program administrator. As one community-based program administrator noted, having a device was the first hurdle, but "how to work with [a device] and install an app, that's something else." An exasperated instructor explained, "Continuous challenges for my students have been the technical problems," such as a computer being down. The instructor pointed out that "helping students with these technical problems [was quite a challenge] while also trying to teach!" A program administrator noted that their program did not have IT support, implying they had to upskill their own digital literacy, so "we became the IT department."

In spite of the many laptops and tablets that were given out, there were not enough to go around. Thus, many learners were still dependent on their cell phones for instruction. However, unlike the early days of shutdown when program staff were grasping at any digital tools and platforms they

could, some were now making purposeful decisions about the learning tools they selected with those who were dependent on cell phones in mind. They turned to applications that were smartphone-friendly, and they helped learners find the best data plan possible. A state director related, for example, "A lot of students use their smartphones. I chose [this application] because it can be used on any device. That's been a saving grace."

■ Access to Internet

A second major issue related to access was the availability and affordability of internet service. This issue also amplified inequality because low-income learners who could not procure reliable internet could not participate in online learning. Lack of access occurred both in urban and rural areas. Some programs were able to purchase mobile hotspots. In some locations, public hotspots were created (e.g., in community college parking lots or near libraries). One state director said that her state used CARES Act funding made available to community colleges to accomplish this. As a result, she reported that "in theory, no one in the state is more than 30 miles from a community college, and therefore from free internet access." Programs also took a proactive role in matching learners with opportunities to access the internet at reduced costs, and those opportunities increased over time. Another state director "gave out a lot of information regarding how families could apply for reduced rate internet" through service providers.

■ Digital Literacy Skills

Once learners had devices and internet access, a third major issue was the lack of digital literacy skills necessary to participate in online learning. Without the skills to use the devices and internet, learners faced further inequality. "Almost everybody should have digital literacy," said a program administrator. "The [adults with a] lower level of literacy or technology are the ones suffering the most. They're not being served." In some cases, this meant additional staff was needed. For example, another program administrator observed, "Just remember not everyone who has technology knows how to use it for educational purposes . . . We had a very challenging time teaching students how to access online books, send work, and so on. I was very fortunate to have Spanish-speaking volunteers who learned the system and were able to help [students] in Spanish." A program administrator added, "We see students on Zoom; they have their children and grandchildren showing them how to use technology, [but] things have improved."

Staff, too, have had to overcome struggles with digital literacy skills. "That was a huge shift for us," remarked a dean administering adult education programs at their college. "Not only were our students not technologically prepared for [the shift to virtual learning], our staff were not either . . . So we're definitely working on that now. We do have the technology. We have provided some initial training, but we're working with our instructors and staff to build on that training to ensure that we're really providing them with the resources they need to be successful."

The data indicate that access issues had decreased over time, but had not been solved. Many learners still lack devices and internet; others are forced to use their cell phones for learning remotely which everyone agrees is a less-than-satisfactory fallback. Instructors observe that the learners who have

been able to participate using digital tools have grown accustomed to and more skilled in navigating the online landscape. Teachers too have become more knowledgeable, comfortable, and adept, but still feel the need for more training. In some cases, meeting the needs of learners who cannot come to programs continues to mean delivering paper packets of work for them to do, sometimes supplemented with supportive phone calls. But lack of access to devices, internet, and digital skill development continues to leave many learners out.

Intake and Assessment

One of the challenges programs faced was doing intake of online learners when their intake processes were outdated and they had never included remote instruction. Intake forms did not contemplate remote instruction and, in most instances, processes required the learner to be present for intake and assessment. An innovative program moved their registration process to the virtual space and had learners start the process with a simple text to the program that prompted an automatic response with a QR code that opened a completely online registration process.

A related challenge was the difficulty—downright inability in some cases—of doing assessments online. This was a two-pronged challenge; on the one hand standardized tests were not designed for remote assessment and many test publishers were not able to react quickly enough to launch completely online assessments. On the other hand, program and state policies often precluded the assessment of learners at a distance. The pandemic challenged antiquated notions of assessment, and administrators had to be willing to be flexible and change long-standing policies to allow students to test remotely or be assessed using non-standardized and in some cases, "homegrown" instruments. A state administrator said they were "thankful for flexibility" and the ability to intake students without waiting for assessment scores. The ability to take the GED® test from home was welcomed by learners who no longer needed to travel to a testing center. A program reported that testing from home was particularly helpful to mothers who could take a test "at 2 a.m. rather than getting a babysitter and driving to the testing site."

> The pandemic challenged antiquated notions of assessment, and administrators had to be willing to be flexible and change long-standing policies

Some programs reported that the exceptions to assessment policies were temporary and, after a few months, administrators there began to require in-person assessment of learners even when in-person classes were not being offered. The return to the previous policy had a negative impact on retention, though, particularly among ESL learners, according to a teacher who reported the administration no longer allowed the intake of learners who had not completed the in-person pre-assessment. Among program staff, just as with state administrators, there was a diversity of attitudes regarding online assessment. For example, one program reported they were "not at a place" where they could do completely online intake and assessment "unless they had to," reflecting an ongoing discomfort with the new process rather than an objective lack of readiness. Some programs only allowed learners to come into the building for assessment purposes so as to avoid the challenges of online assessment. Others continued to improvise with "homemade" assessments.

Learner Participation

The first COVID-19 report documented the challenges that learners were experiencing in their daily lives, including unemployment, food insecurity, illness, and supporting children's remote learning. Challenges that had been present in their lives prior to COVID were, in some cases, exacerbated in the early days of the shutdown, including addiction and complicated immigration statuses. When it came to participation in learning, these challenges were compounded by low digital literacy skills, limited broadband access, and a lack of devices from which to access remote classes. Even non-COVID related events took a toll. From the murder of George Floyd and the unrest that followed to local flooding to changing economic and labor market conditions, the capacity to participate in AFE was affected. Clearly these events had a dampening impact on enrollment and engagement in learning in the early days of the pandemic.

From the second round of interviews, it was clear that these challenges had not dissipated for everyone. Students still often needed enhanced support as they continued to experience more than usual stress and anxiety. For those trying to learn at home, online learning had not necessarily become a routine task. As one teacher explained, "You have all of the pressures that you always have at home, but you also are supposed to be making time for this work that you would normally be outside of your home doing." In illustrating this, another teacher described a woman whose husband takes care of their kids during class. She participates from her closet in the dark, so they won't know she is still at home.

Not surprisingly, many interviewees indicated that learner enrollments were still down. In addition to the life stressors and access issues already discussed that kept many students from participating, teachers and program administrators acknowledged that some learners simply preferred learning in-person and that this also contributed to the lower participation. Some of the decrease was also attributed to changing contextual factors beyond learner preferences. For example, one program administrator explained that employers who had previously referred learners to them were not currently doing so. Similarly, there was less demand for certain career pathway programs due to changing labor market conditions. Additionally, some programs had lost access to locations where they had previously offered classes, for example in corrections facilities. Reports of decreased enrollment varied from about 30 to 50 percent. Programs took pride in what they were accomplishing, however, even if they were serving fewer students. As one stated, in spite of losing nearly a third of their students, "I'm pretty darn proud that we served 200 [learners] this year through piecing together a variety of options."

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However, other programs actually reported increases in enrollment, especially among young people who had grown discouraged by how online learning had been handled in their high schools. Some attributed the increase to the growing understanding among learners of the convenience of participating online. One person explained, "It took some time, but they have seen the bonuses of doing their education from home. The teachers feel the same . . . It's a time-saver for everybody." Another noted that once students start attending, they tend to stay because "there was no issue with

weather. A lot of our students walk [to class], so weather can be an impediment. If school was closed or there was a school holiday and they were home with their kids, they could not come to class. But with virtual [learning], they could." For those that did enroll, programs generally reported better-than-normal attendance for the same reason: no childcare or transportation is needed.

Along with attendance, teachers also observed that learner engagement had changed in the remote context. For some, they were able to engage more deeply as they became more comfortable with the technology and the new way of learning. One person observed learners engaging in "some really good metacognitive thinking that they had not done before." Another stated, "It was hard for everyone to learn remotely [at first], but those who stuck with it did well." Some students could engage in ways that were not possible in the classroom, for example, by using private chat to ask questions they might have been uncomfortable asking in person. As one teacher stated, "For some students this is the best thing ever. On the Jamboard, it's easy for them to engage." However, when learners only had access to classes through their phones, some teachers observed that it was harder to engage; technology issues were a deterrent as well, and some dropped out due to poor broadband access. One program manager explained that they had cut the number of synchronous contact hours offered which left more time that learners had to learn on their own. She felt the need for increased independence was also discouraging for some. Another program manager observed that learners who were preparing for a high school equivalency exam could be discouraged by the fact that testing centers were not open. However, she made it a priority to identify an alternative.

There was not much consensus on who thrives in online learning. One thing most agreed on was that higher skilled learners were more likely to be willing to participate and could do so more effectively and efficiently than other learners. There also seemed to be consistency in the observation that older learners were generally more resistant to learning remotely as they were resistant to learning how to engage with the necessary technology. One practitioner reported that "the highest and the lowest levels of students have the highest participation." Several others reported that lower-skilled ESL learners were doing well. But in contrast, one said, "ESL courses [are] significantly lower [in enrollment]; ABE/ASE enrollment is constant." Another reported, "Even our lowest level students who are homeless—if they stuck with it and we gave them appropriate support—can do remote learning." Responses show some similarities, but no consistent pattern of (successful) participation emerged.

The fact that some types of learners seemed to thrive in one context and disappear in another suggests that participation patterns may have more to do with how effectively programs met their instructional as well as emotional needs by establishing a sense of connection and care, than the potential of specific categories of learners to be successful in online learning. When programs were successful, especially with groups of students who are perceived to be more difficult to serve remotely, it seemed clear that instructors had gained skill through their participation in professional development and there were more comprehensive supports—instructional, technology, emotional, and

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basic needs—in place. However, no matter how successful programs were with online learners, the drop in and changed demographics of students who were enrolled during the interview period indicate that many learners had fallen out of the system.

Instruction

When it comes to instruction, teachers expressed that they had engaged in ongoing problem solving and learned a great deal as they settled into online teaching over the previous 12–18 months. In general, descriptions of instruction reflected the need to be flexible. Flexibility was reflected in everything from a willingness to try having different kinds of homework expectations to different teaching times. Many teachers indicated that the digital learning environment enabled them to individualize and differentiate instruction more effectively

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than in-person teaching and facilitated ongoing formative feedback in ways that had not previously been possible. Clearly, the pandemic-related closures pushed AFE programs to use more digital tools for instruction and to implement their curriculum in an online environment. In our second round of interviews, practitioners reported that they had settled into new ways of teaching that ranged in effectiveness. Some were quite enthusiastic about what they could accomplish; others were less satisfied. A few teachers were only looking forward to going back to fully in-person classes as soon as possible. As programs opened up and some learners returned to classrooms while others wanted to continue to participate remotely, there was a growing recognition that there would be challenges in balancing the needs of learners who want to learn remotely with those that do not.

◼ Digital Instructional Strategies

Programs generally leveraged common digital strategies in order to provide instruction during the shutdown: use of learning management systems to house digitized curricula, comprehensive and licensed online curricula, and video conferencing. Programs and instructors described varied levels of adoption and success with these. Additionally, some programs used social media apps to remain in contact with students between classes.

Programs used learning management systems (LMSs) in varied ways to organize and provide ready access to resources learners need for orientation to the programs, to stay in contact with students, to present instructional content and learning activities, and to track engagement. Popular platforms include Canvas, Moodle, Google Classroom, Edmodo, Blackboard, and D2L. The latter two were highlighted by practitioners from two programs as helpful in providing shells within which instructors could plan work and create a repository of materials for other instructors. Video conferencing was a primary tool for synchronous online teaching and tutoring. Some programs used embedded tools such as whiteboards and breakout rooms. Two programs reported that some instructors and tutors found them too difficult to use, but this was the exception. Most had adjusted to video conferencing as a teaching tool.

Program staff also reported a growing facility with digitizing curriculum and found that having both instructional text and video tools is helpful. Some programs had continued to use their own curriculum, but others had begun using commercially produced online comprehensive curricula, such as Burlington English, both as supplements to instruction and for homework. Having such a curriculum, especially when paired with teacher-created content in an LMS, helped students learn at their own pace and review difficult material, and enabled instructors to provide more individualized support. Online curricula, whether commercially produced or developed by the teachers themselves, allowed teachers to share materials and provide resources available throughout the duration of a course. Access to videos in an LMS was noted as particularly helpful. This gave learners the opportunity to watch instructional videos and recorded lessons whenever they wanted and as many times as needed, and instructors could provide supplemental videos to help students work through problems. One program began to use a flipped classroom approach.

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Social media apps, such as Google, Slack, and WhatsApp, were used as a way for students and teachers to remain in contact. These digital spaces enabled students to help each other with homework and easily make appointments with teachers. The increased interaction afforded through use of social media supported the development of learning communities. This was surprising to teachers who had not previously taught or learned online. In some cases, they reported more interaction than in face-to-face settings in both quantity and quality.

> The increased interaction afforded through use of social media supported the development of learning communities.

■ **Instructional Format Changes**

Almost all program staff identified instructional format changes they had made during the shutdown that they had continued to employ even as programs began to open up for in-person instruction. These fell into two categories, team teaching and added courses and/or curriculum.

Team Teaching. Team teaching was facilitated by the online teaching environment, as the practitioners involved no longer had to be in the same location at the same time. This gave programs the capacity to better support learners. In some cases, team teaching also helped programs manage class size. One program used their support teacher to work with the students that were doing well with online instruction thus freeing up the primary teacher to work with lower-level students in a breakout room. Alternatively, they could have many groups working in breakout rooms. The support teacher would work exclusively with one group while the primary teacher switched around among groups. Teachers reported that this grouping approach allowed them to be more creative, differentiate more, and feel less pressure to be everything for all their students. At another program, the primary teacher provided instruction while the support staff monitored the chat, kept students engaged, and ran Jamboards, polls, and breakout rooms.

In another example, a team of lead teachers co-taught a 3-hour high school equivalency class. Each teacher took the lead on a different subject. This approach was particularly helpful because it enabled

teachers to teach to their strengths. Students also liked that long classes were broken up with different modes of teaching. Thus, the virtual space afforded opportunities for teachers to expand their content knowledge because they could specialize. These team teaching approaches exemplify the additional support that the digital environment enables.

Added Courses and Tutoring. Programs also took the opportunity to innovate in their course offerings. For example, one program added an additional short class that functioned as a bridge between registration and course enrollment. Called Conversation and Technology Circle, the class combined language and literacy learning with technology instruction and conversation in twice-weekly meetings. It was offered to learners who had to wait for a scheduled class start due to managed enrollment. Two teachers taught this course; one focused primarily on reading, listening, and speaking, while the other focused on conversation and technology. This informal learning opportunity helped students prepare for the virtual classroom. The online environment gave program managers added flexibility in course offerings, in part, because there were no space demands. They also found they had more flexibility in course schedules because instructors did not need to move from one program site to another.

There were also descriptions of supplemental tutoring done by teachers, who spent more time offering individualized instruction. One teacher noted they did this "because this is what it takes to be successful." This indicates the awareness that students need more support than ever and perhaps indicates why many learners did not falter despite the hardship of trying to learn during the pandemic.

Impact of Ongoing Remote Instruction on Adult Educators

The pandemic changed much about personal and work life for adult educators. Just as was reported in Belzer, et al. (2020), some flourished in the midst of the changing demands and new expectations of the online environment; others continued to resist it and longed to return to the classroom or decided to leave the field. To some extent, there seemed to have been some "weeding out," with those who remained being more willing and more committed to teaching in an online environment.

◼ The Cost of Change

Most teachers and administrators noted the importance of being flexible and able to live with ongoing challenge and change caused initially by the quick transition to remote teaching and more recently by the growing need (in some locations) to teach in a hybrid or HyFlex format where some learners were online, some were in the classroom, and some were switching back and forth at will between the two instructional settings. One program administrator observed that this required teachers to be like willow trees "bend[ing] and blow[ing] with the wind." Several interviewees marveled with pride at their capacity to respond to the changing conditions. Professional life during the pandemic has meant following an uncharted path which no one was prepared for or expected to continue beyond a few months. As one practitioner said, now we "make a plan, [but we] expect it to change [because] it will change."

> Professional life during the pandemic has meant following an uncharted path which no one was prepared for or expected to continue beyond a few months.

There was quite a bit of pleasant surprise, and even exhilaration, reported about how well they had handled the imperative to provide effective remote instruction and intensive support for learners during the previous 12–18 months. Yet, interviewees also expressed that there was a high level of exhaustion and anxiety. Not only were there ongoing demands to learn new tools and instructional strategies appropriate to online learning and specific learner needs, but teachers continued to expend considerable energy providing ongoing and intensive support for learners. One teacher noted that many were experiencing "compassion fatigue." Some were also experiencing anxiety as learners, who may not have been vaccinated and may not be willing to mask, were returning to the classroom. They were also worried about having to learn even more new skills in order to manage hybrid and HyFlex learning environments for those learning remotely while learners were also present in the classroom. As one teacher facing this next new reality stated, "It is not a simple thing to do." Additionally, teachers, like learners, continued to struggle with their own personal challenges of working from home. It was noted that the lack of personal connection, although difficult to measure, led some to depression and impacted team building and relationships among teachers and staff. An administrator said "it's not necessarily quantifiable, but they're feeling [the isolation]." One program administrator noted that staff need caretaking to avoid burnout and feeling overwhelmed. At another program in response to this need, they created well-being workshops for staff designed to relieve stress and address emotional and physical wellbeing.

The frustration of having to learn to teach in a completely new environment under constant pressure drove many educators to exhaustion. This exhaustion was shared by administrators. The ongoing fear of contagion led many to feel what one administrator called "COVID decision fatigue." This was related to having to assume responsibility for not just educational and administrative functions but also for the health and safety of staff and students, forcing them to ask questions such as, "Should we do this, shouldn't we do this, is this safe?" One administrator reported suffering from "post-traumatic stress from hosting outdoor classes for a very vulnerable population of asylum seekers" who caught the virus in spite of all the training efforts and precautions. One of her staff got the virus two days after a class meeting leading to a sense of panic and feelings of not being able to take charge of the situation. And yet, for all the challenges, there were positive outcomes and benefits. One of the administrators admitted that even if "it is not the same as meeting in person," the ongoing online meetings had been a "chance for me to get to spend more time with program directors because it's been easier for us to meet more often." As an administrator relatively new to her position, she appreciated the opportunity to get to know the programs in a way that face-to-face meetings would not have allowed. "It's been hard in just about every other way," she said, but "that's the one good thing."

■ Collaboration and Peer Support

In many locales, administrators saw that teachers benefited from structured opportunities for collaboration and offered professional development (PD) opportunities that included more collaborative sessions which encourage teacher sharing. Administrators understood that these sessions help strengthen a sense of community for teachers, especially for those unfamiliar with and new to online learning. Many program managers came to see the importance of encouraging

teachers to share ideas, lessons learned, and next steps. Additionally, some programs began to support and encourage teacher-peer observations. One practitioner reported that teacher grace was extended among colleagues during observations because they understood that everyone is imperfect and needs help when it comes to integrating technology into instruction. This reduced the stress that teachers often experience during observations and supported a realization that mistakes and technical issues during virtual sessions were normal and universal. Teachers were also encouraged to team teach as a way to learn from each other and to increase teacher connections.

■ Professional Learning

Teaching remotely created ongoing learning demands for AFE practitioners. One person said that they had learned "as much as the students;" this sentiment was echoed by many others. An important learning strategy was experiential: simply trying out new tools and platforms, getting feedback from students and through their own observations, and finding their way towards effective and efficient use through trial and error combined with reflection. Learning informally from colleagues was also an important aspect of professional learning. However, the ongoing opportunity for formal professional development also played an important role in teacher learning, and it took many forms. State offices continued to offer a substantial amount of PD as did publishers of online instructional resources. Sessions took place synchronously and asynchronously, on demand. Very often PD was facilitated using the digital tools teachers were being encouraged to take up, thus promoting the method through the medium. Although some programs have instituted a hybrid PD model, they have also found that online PD sessions have their benefits especially because they promote teacher attendance and encouragement and are more cost-effective.

Professional development sessions continued to include 'how-to' sessions on technology use as they had early in the shutdown. One program manager reported attempting to provide the "most practical resources" that would have the most impact on teachers, and a different program manager said they grab any kind of professional development that administrators believe will be helpful for teachers. However, PD also included new areas of focus not evident in the early days of the shutdown. For example, one program provided PD sessions focused on counselors and case managers and how their services could better support learners in the online environment. Now that remote teaching has become an everyday aspect of practice, it is becoming increasingly clear to some AFE practitioners that PD needs to go beyond classroom teaching and learning and into how technology can be used as a tool that will sustain and support AFE moving forward.

Overall, ongoing and continued PD sessions and activities have been key to teachers learning new ways to teach in both the traditional classroom and the virtual space. There have, however, been some issues associated with PD including the potential for teachers to multitask while attending PD virtually thus diminishing engagement and impact, the many work responsibilities that may interrupt participation in PD sessions, identifying new and relevant training modes and ideas, and teacher reluctance to complete additional training on the computer after being on their computers all day.

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Supporting Learners

The pandemic had a deep impact on learners, too. Isolation, fear, new ways of learning, limited access to needed resources, and the inability to make technology work for assigned tasks were only some of the challenges. Many program leaders reported being concerned about some learners experiencing increased depression due to prolonged isolation. When faced with the outcomes of the pandemic, AFE programs stepped up and provided numerous supports to learners that had not been previously considered (or considered necessary). The level of support was remarkable and inspiring, and many of the changes programs implemented during the early isolation days of the pandemic were becoming more institutionalized as programs adapted to hybrid instruction as the new normal.

> AFE programs stepped up and provided numerous supports to learners that had not been previously considered (or considered necessary).

From making themselves, in the words of an administrator, "super-available" at all hours for individualized tutoring to distributing food and blankets during a winter storm, programs went out of their way to support their communities, often doing things they would not have imagined doing prior to the pandemic. Programs supported learners with rental assistance, food deliveries, gift cards for groceries, and other necessities. Some colleges applied to access government funds under the Higher Education Emergency Relief Fund (HEERF) for pandemic relief to be able to help their learners.

■ Communication

Programs embraced new strategies for the use of digital technology to stay in touch and check in on learners during emergencies as well as when learners missed more than one session. Some programs used "mass texting" to connect with students, while others used platforms designed to communicate with learners at all times through messaging and chatting features. Staff and volunteers distributed information on community resources, and throughout the pandemic, reached out to check on learners during the long months of isolation. It was important, in the words of an administrator, for learners to know "that we really care for their well-being and that they are not just a number for us." This administrator reported that one of their learners had compared their program to a church, saying. that "the school took care of me like a church, maybe even better than a church." According to this report, the learner appreciated being called to see if they were OK and was thankful for the help and support received.

■ Flexible Programming

The additional support and connection with students led to what a state administrator noted was higher learner retention than in previous years. It is possible, as the administrator noted, that the improved outcomes were due to a combination of factors including the "anytime availability" the teachers were offering and, possibly, that "those who signed up in this crazy year were more motivated or prepared or had more time . . ." Programs were working for their learners and proof of that was increased retention. One administrator, acknowledging the impact of this effort, wished they had figured out additional ways to support their learners earlier. However, she knew that what

they were doing must have worked because learners were persisting in their education. One example of the benefit of online instruction coupled with the support provided by the program, is a learner who had to return to their native country during the pandemic but was able and chose to continue participating in her classes using the device provided by the program.

■ Case Management

Another way that programs supported learners was to offer flexibility in hours of instruction and start online office hours during which learners could ask questions and receive additional tutoring. One program started what they called "Get Stuff Done" hours and, once Zoom was made available to them, learners initiated their own study groups. However, for all the flexibility offered by programs, it was also noted that consistency in the scheduling of instruction and support hours was important to learners.

A change administrators made to their programs was an expanded reliance on case managers and counselors to provide additional support to their students, for example, when learners lacked motivation or felt isolated or were struggling to meet basic needs. It became clear from student feedback that offering the support of a counselor/case manager made sense for the program, as students started to realize that, when they were struggling, "that person would help me figure out solutions." A program that had always had counselors started having them "pop in" on Zoom classes and meet students in a private breakout room to offer support, share information about resources, and talk about the challenges learners were facing. This option was so helpful that even as the program restarted on-site services, they continued making counselors available online for students needing extra support. One of the programs saw a need, early on, to support the adult high school level students whose persistence was lacking. They created a "retention and success coach" position that supported those learners on an ongoing basis. This staff person reached out to learners to see if they needed support, reminded them of upcoming testing opportunities, and kept them engaged. The position was so successful in retaining and supporting program completion for those high school students, that they expanded the position to support English language learners and students with intellectual and developmental disabilities (IDDs.) The program will retain these positions even as we come out of the pandemic.

> A change administrators made to their programs was an expanded reliance on case managers and counselors to provide additional support to their students.

As a consequence of the reliance on case managers, coaches, and counselors, programs also started to provide more professional development focused on different ways to support students with COVID-related resources and information as well as with more general self-care, housing, mental health, and other daily challenges. The pandemic changed service priorities for many programs and learning how to provide support to students became as important as learning instructional content.

■ **Sustaining Support**

Flexible learning opportunities, the creation of online study groups, wraparound support services, availability of counselors and case managers, continuous communication between teachers and learners, the ability to test from home, and distribution of emergency assistance were the most commonly mentioned interventions that made it possible for programs to continue opening their (virtual) doors to learners and for them to persist and succeed in their pursuits. However, one administrator expressed concern that support services offerings are inconsistent and that the availability of wraparound services often depends "on what door you walk in through." Even with internet access to learning, adult learners need childcare, housing, food, reliable internet, and devices" he said. He expressed concern that, while the pandemic pushed innovation and forced programs to creatively support their adult learners, these innovations will not be sustainable without new supports.

> While the pandemic pushed innovation and forced programs to creatively support their adult learners, these innovations will not be sustainable without new supports.

Flexibility in terms of delivery and curriculum also meant working around the limitations imposed by state data management systems. A general agreement among teachers and administrators was that in order to sustain those changes and innovations that worked during the pandemic, programs and state-level administrators must continue offering that flexibility. State agencies may need to be innovative in the way they issue requests for proposals for funding, reducing requirements that stifle innovation and focusing, instead, on what programs commit to doing rather than on specifics such as locations, times, and number of sessions. A word of caution, however, came from a state administrator who said "Extreme flexibility is more expensive; it's not one teacher to 25 students. Classes are much smaller. Teachers don't want to teach 25 at a time remotely. They have to team teach or reduce class size. This will result in a higher cost per student. Quality costs more."

Challenges and Opportunities: Overview

There is nothing good about a global pandemic. Being forced to adapt to a shutdown created many challenges, but also created new opportunities, or what we call in the first report, "silver linings." These included programmatic and instructional innovation and increased access to learning for some learners. While the innovation achieved during the pandemic may have eventually occurred anyway, it was certainly spurred on by the necessity and imperative of reaching learners during the shutdown.

■ **Challenges**

Many of the challenges identified at the start of the pandemic continued more than a year later. Administrators had to adapt or disregard previously enforced rules, promote new ideas for professional development, and find ways to offer support to learners that had not been common practice including purchasing and distributing computers and other digital devices and offering technical support to learners. Among instructors, there were unique situations which often became challenges to their own administrators, not the least of which was, sometimes, an unwillingness to engage with the technology and an unwillingness to learn new ways of delivering instruction.

An administrator referred to the inability to get instructors fully on board and capable of teaching online because of limited resources to provide support and professional development. This led some programs to discontinue these instructors' employment. For those who stayed on, the consistent challenges that many learners faced when connecting remotely in less-than-ideal circumstances sometimes made it difficult for instructors to engage with them, an issue that was exacerbated in large classes that did not have more than one instructor. This combined with the many distractions of learning at home led many programs to experience low retention.

Although there were many creative and innovative approaches to online learning developed and adapted during this time, not all instructional challenges were overcome. For example, some instructors reported on the difficulty of teaching English as a second language online. Language teachers often depend on being able to see the learner's face or to read gestures. When instruction moved online, that ability was lost in many cases. As noted before, because of privacy concerns many language learners would refuse to turn on the cameras when asked and, sometimes, even muted their devices making the teaching of language very difficult. Although this was not necessarily discussed in the interviews, we know from experience that many learners felt embarrassed to let others "see" their homes or hear the distractions generated by the very limited space learners were sharing with other family members.

There were many reports of innovative uses of technology to build community among learners and instructors and to diminish isolation. One program manager observed that this has to be done very consciously. "We had to learn how to bring the human touch and where a group becomes a family. It doesn't always happen, but people have become more effective at this. It stressed the importance of the socialization aspect—we think about curriculum, textbooks, etc. but an important aspect is the interacting and socialization that helps students learn—not just with the teacher, but with the students." However, as the pandemic forced many to stay home and avoid gatherings, the lack of social connections could still leave many feeling isolated. And some instructors felt unable to connect with learners, oftentimes not having ever met them in person. Clearly, "it is more difficult," as one administrator said, "to retain students when the relationship is not there." There seemed to be a consensus that learners were dealing with a great deal, and it is difficult to address their situations "when you can't see their face."

> "We had to learn how to bring the human touch and where a group becomes a family. It doesn't always happen, but people have become more effective at this."

Another challenge was not knowing, in a data-driven way, if efforts to keep learners connected and innovate in offering online learning opportunities were effective. One administrator expressed frustration that agreeing on what was effective practice in online learning was a real challenge. "We don't have the data to determine what effective is," she said, explaining that because of limitations on testing they did not have data on learning gains during the pandemic. This limitation also caused some administrators to be overly concerned with accountability at a time where traditional measures of program performance were being challenged by the remote teaching situation. A teacher said that their administrators "were counting on paperwork to keep tabs on us," thus creating an unnecessary burden.

■ Opportunities

There were many advantages to the new remote teaching and learning arrangements that became common as a result of the shutdown. Program leaders soon discovered that online education offered a way to reach learners who were not reached before and retain many whose life circumstances would have, pre-pandemic, forced them to stop their studies. Remote instruction was both a challenge and an opportunity for instruction; programs reported that while the numbers of learners served dropped significantly, those who remained in the program had better outcomes than in face-to-face instruction.

Among teachers and administrators there seemed to be a general agreement that the pandemic offered an opportunity to innovate, creatively solve problems, and learn in a new environment. While moving to the online space was done out of necessity and in a very challenging situation, teachers and programs adapted and learned, overcoming "nervousness, reluctance, and fears." Some teachers felt "more engaged and connected than ever" even thriving after learning from what one interviewee called "experimentation by necessity" and being required to figure out solutions to the challenges "if [they] wanted to survive." Having to move instruction online forced teachers and programs to experiment with different solutions to students' problems, which were often not too different from the problems the instructors were facing. For many, it was an opportunity to learn together and to figure out problems as a team. "My success is their success," said an instructor who added, "[the students] saw me struggle and stick to it, so I was a good model for them."

> The pandemic offered an opportunity to innovate, creatively solve problems, and learn in a new environment.

Professional development programs were responsive and flexible and offered technical support "on the fly" as soon and as often as they could. There was agreement that programs were able to offer quality online instruction even in cases where, before the pandemic, they thought it impossible to do anything online. One of the teachers reported that the online classroom afforded her the ability to assess learners in a more proficient way using a meeting room's chat feature and offer immediate feedback rather than "wait until I collect all their papers and do it after class." Given sufficient technical support, online instruction was a solution for learners in isolated rural communities where it would have been impractical to provide an in-person tutor. In partnership with public libraries, some programs offered remote instruction to learners who, otherwise would not have been able to access a tutor.

Overall, although the challenges of moving to online instruction were many, teachers and administrators interviewed agreed that they had learned a lot in the first year of the pandemic; they had started to figure out how to make online instruction work best for the learners' making it more engaging. When issues of access and technical support could be addressed, students expressed to their teachers that online instruction afforded them a flexibility that face-to-face programs did not have

Beyond the Data: Innovations Over Time

Since our data collection in fall 2021, the field has continued to adjust and normalize use of digital technologies to support flexible options for adult education administration and instruction. Robust and scaled implementation of what was previously considered innovative and unique is becoming more common. What follows are some examples of effective practices that are likely to endure. The examples have been gathered through adjacent research on remote learning conducted by World Education, Inc.[3] They are organized by programmatic work areas that shape learner experience in adult education programs.

Recruiting Learners

Word of mouth recruitment, a promising strategy for finding new learners, prior to the pandemic, was less effective when not all learners attended programming or information sessions in person. This approach was also stifled by the fact that current and potential learners tended to be more isolated from each other due to the shutdown. Increasingly, social media has become a way to leverage student-to-student referrals. In one example, Building Skills Partnership, a community-based organization serving immigrant service workers in California, took personal referral to a new level— asking bilingual staff to reach out through social media to help potential program participants understand program opportunities (Vanek et al., 2021).

Intake and Orientation

Many programs noticed during the pandemic that they could make intake and orientation more efficient by moving activities online. For example, New Haven Adult and Continuing Education began to include intake forms in multiple languages on the information page of its website and other programs created new introductory videos explaining the orientation process (Vanek et al., 2021). An adult school in St. Paul found that distributing the work of intake and orientation between in-person and online modalities has freed up staff to work with those learners who need a more personalized approach to orientation in person (*Remote ESOL case study: Reimagining the work of adult education to succeed in challenging times*, 2021). Programs have noticed that having information in videos posted on their website means that information is readily available for learners to revisit as needed.

Instruction

Shifts in modality of instruction and technology tools and digital resources that showed promise during the early days of the pandemic have remained popular. Programs have moved to make more robust and sustainable opportunities for engaging learners through digital tools or applications, promoting resource sharing among teachers, and formalizing HyFlex models of instruction.

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3. While our interviewees were promised confidentiality and we do not state their locations, these examples are culled from documents that do.

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■ **Digital Tools**

Forced to boost opportunities for engagement in remote instruction, teachers turned to digital applications that have enriched instruction. Vanek and Goumas (2021), in a brief synthesizing a panel discussion of education leaders noted several that have become commonplace. These include:

- **Jamboard**, Google's free digital whiteboard application supports collaboration.
- **Flipgrid**, is a free threaded video discussion application. Its user interface and navigation is clearly laid out, making it easy for learners to post short video responses to prompts from a teacher or another student.
- **EdPuzzle**, is a free video annotation application that teachers can use to make interactive activities from any video—either one they have found on YouTube or something they have made themselves.
- **Texting apps**, which were the only way some learners could be reached in the early days of the pandemic. They are now routinely used to share homework or remind learners of important due dates. Texting is generally considered more convenient than email for learners and there are several applications that make it easier to text whole groups of students (e.g., Remind, Talking Points, and WhatsApp).

Together these applications and others enrich learning by providing opportunities for learners to interact with each other, their teacher, and instructional content in creative ways.

■ **Resource Sharing**

Moving rapidly to remote instruction made it essential that teachers collaborate and share resources. Indeed, many programs supported such collaboration by offering paid time for it (Vanek et al., 2021). Individual programs and states have set up repositories for sharing lessons and resources they have created or located. For example, the #GoOpenVA is a website and database maintained by the Virginia Department of Education; the site has a collection of tagged resources relevant for adult education teaching and learning. A nationwide initiative called CrowdED Learning is supporting service learning projects that teaches instructors about creating or curating digital learning resources, as the teachers work collaboratively to add to a library of Open Educational Resources (OER) accessed through the Digital Skills Library or the EdTech Integration Strategy Toolkit.

An important policy change in several states has made it possible for these created and curated resources to be used in distance education. Drawing on the provision of the National Reporting System for Adult Education (NRS) distance education policy for proxy contact hours, many more states have implemented the Teacher Verification Model as a means by which student time spent learning can count as a proxy for attendance. Arizona, Minnesota, and South Carolina all have scaled use of this policy.

■ HyFlex Model

The hybrid-flexible model, or HyFlex, is simultaneously hybrid, a combination of online and in-person instruction, and flexible, meaning students can choose which modality to engage on any given day (Beatty, 2019). Program success with remote live instruction has spurred many to scale access to HyFlex courses in order to continue to offer flexibility and retain students who cannot regularly commit to in-person attendance. They also serve learners who need or want to learn in a physical classroom space. A commitment to effective HyFlex instruction requires adequate professional development for teachers, perhaps increased planning time as they adjust to this new way of delivering instruction, and an investment in cameras, microphones, a whiteboard, and any digital technologies students might need to participate online and from home (Rosen, 2022).

One effective example of the HyFlex model can be seen in adult ESOL classes at Pima Community College and described in *Building on a Pilot: HyFlex ESOL Class at Pima Community College* (Hawes, 2021). The class meets two days a week, for two hours each meeting. The teacher meets in person with students and has set up remote live attendance using Bluetooth speakers, microphones, and a webcam. To ensure the online students can see the teacher, she uses an OBSBOT Tiny lectern webcam, which uses AI-controlled visual tracking that follows instructors as they walk around the classroom. The teacher also uses asynchronous instruction to support learning for students who cannot meet at the regular time. The teacher strives to provide equivalent strategies so that students have similar experiences no matter how they engage.

Looking Ahead: Sustaining Innovation

At the time of writing, it appears that there is a chance that the pandemic is shifting slowly to an endemic state, where the virus is still circulating but because of vaccination and prior infections will not cause such significant disruption in daily life as it did during the early days of the shutdown (Zarefsky, 2022). Despite this, and though we are anticipating returning to 'normal,' there are adjustments that we have all made in the past years that many hope remain in place. People will, hopefully, continue to have masks on hand or stay home when they are sick. Industry research suggests that home cooking and delivery of groceries and prepared food will stay well above 2019 levels (Deloitte, 2022). And in the area of education, current research suggests that by way of experience the pandemic has made palpable the power of digital technologies, "as being capable of providing personalized learning, finding new responses to students' learning needs and making education systems more relevant to the modern world" (Zancajo et al., 2022, p. 118). As reported earlier, our interviewees indicated that even as they return to in-person instruction, they will continue to offer remote and hybrid/ HyFlex options to learners as a way to increase access and equity.

There is general agreement that online instruction, digital resources, digital literacy, reliance on case managers and online counselors, professional learning groups, and some manner of blended learning must continue. According to at least one administrator, one key to success was the flexibility to allow programs to do "whatever it took to keep things going" including the ability to decide what platform

worked best for the program at the time and what curriculum met the needs of the students best; "no single platform; many platforms; no single curriculum; many curricula," she said. Necessarily, one of the concerns of teachers and administrators interviewed was the need to sustain the innovation that has taken place.

Because of the challenges programs faced in the pandemic, the AFE field saw leadership emerge at different moments from teachers and volunteers who were willing to try new ways of doing things, as well as from administrators willing to be flexible and imagine different ways of doing things. In order to sustain the successes of the field during these challenging times, leaders at the local and state levels will need to shift their attitudes about what works, the effectiveness of technology and digital access, and the value of these tools. Administrators will have to step up into roles in which they actively advocate for and promote innovation and change rather than espouse older processes and outdated programmatic requirements. Once the successful interventions have been identified, leadership will be needed, at all levels, including from students; if the changes are to be sustained, there is a need for "learner leadership," according to a national leader on learner engagement who is concerned that "programs are scrambling to reach their numbers and do assessments, for funding and accountability, [but] they are not asking their students for their opinion . . ." regarding what works and does not in online instruction and what keeps some students from participating in online instruction at all. However, to ensure that the innovations and shifts described above are sustainable additionally requires overcoming challenges described in more detail below that have become salient in the past year.

Innovations to Sustain:
- online instruction
- digital resources
- digital literacy
- reliance on case managers and online counselors
- professional learning groups
- blended learning

Progress on Access

Access continues to be an issue for programs seeking to maximize use of digital technologies instruction. However, because the pandemic shed light on digital inequities in the U.S. and made clear that AFE learners may lack access and devices, there has been a movement to advocate for digital inclusion and scale efforts started earlier in the pandemic. For example, digital navigator programs have sprung up across the country. The goal of these programs is to provide participants with much needed internet and Wi-Fi-enabled devices while providing technical support and the opportunity to build foundational digital skills contextualized through relevant instructional content. Digital navigators work with learners one on one or in small groups in person, on video chat, or by texting to address digital access while they also help learners with digital literacy learning and completing tasks like finding a job or accessing services online (Digital US, 2021).

The Digital Equity Act, passed in Spring of 2022, paves the way for seeding or scaling digital inclusion efforts in the U.S. The law requires the National Telecommunications and Information Administration to set up grants to states that will fund digital equity and digital inclusion activities, making it possible for states to support increased adoption of broadband by residents who have traditionally been deprived of access (Digital Equity Act, 2021). State adult education leaders will need to insert

themselves into discussions about how state grants will be spent, and many will need access to technical assistance to do so. For example, the Transforming Immigrant Digital Equity project at World Education offers technical assistance to help states figure out how to do so.

Teacher Support

Our first paper illustrated how, in the early days of the pandemic, teachers rallied in impressive ways to quickly figure out how to deliver instruction using new digital technologies and digital resources (Belzer et al., 2020). In some cases, students benefited from the flexibility of remote learning and received more personalized instruction (Vanek et al.,, Vanek 2021; 2022). To make this happen teachers had to change the way they worked to develop lessons and engage learners, which resulted in monumental workloads for many teachers. Though the situation has improved somewhat, calls for keeping 'what worked' mean that intensive demands on teachers remain in order to leverage digital technologies that make learning opportunities effective, flexible, and personalized. To do so, teachers need adequate support, especially regarding ways to help learners build the digital skills needed to use those technologies.

One notable effort to provide that support is a new initiative funded by the U.S. Department of Education, Office of Career, Technical, Adult Education (OCTAE) called Digital Resilience in the American Workforce (DRAW), the goal of which is to better prepare adult education instructors to help learners engage in learning activities, and feel confident accomplishing digital tasks as part of work and daily life.

Research

From the start of the pandemic, adult education programs essentially became laboratories for experimenting with new ways of teaching that leverage digital technologies and digital learning resources. Individual teachers, the programs where they work, teacher educators, professional development leaders, and researchers have all learned much in the subsequent two years (to date). A range of research has been conducted including teacher-driven personal reflection and analysis, field testing of new products, and descriptive research like that reported in this paper. What is needed now, however, is both to broaden and deepen our knowledge of effective practice and gather evidence on the impact of the innovations made necessary by the pandemic. In other words, there is also the need to identify which innovations were effective, for whom, and under what circumstances. This can be accomplished through more empirical research which can better inform the field about how these technologies and strategies could be effectively implemented to shape and improve learning (Alamprese, 2021). Research is needed that is designed to provide insight into the circumstances within which digital tools, platforms, and resources work well and for whom. This can help a range of interested stakeholders. For example, developers can gain insight to better craft their technologies. Policy makers can provide guidance on program implementation and outcomes. Program leaders can understand the conditions required for learning,

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and teachers might be better informed about how to select from a range of technologies and better connect learners with the technologies they are using in their teaching. Finally, more research focused on improving professional learning for teachers can help them more readily adopt new digital technologies or technology-rich instructional approaches.

In 2021, the Institute of Education Sciences (IES) announced the largest investment ever made in adult education research (personal communication, Mark Schneider, IES Director). The initiative has funded six studies that focus on developing or making use of a digital technology to support adult education, and a collaborative effort to support the research teams, create opportunities for interaction with interested parties, and disseminate information. The goal of the resulting Collaborative Research for Educating Adults with Technology Enhancements (CREATE) Adult Skills Network "is developing a research base about effective ways to use technology in adult learning. It develops, adopts, and evaluates interventions that use technology to build adult learners' skills and improve their academic outcomes." Practitioners, researchers, and other interested parties that engage in policy development or funding stakeholders are all members of the network. This broad coalition is intended to support the relevance and utility of the research and to ensure that information about it is disseminated in an accessible manner.

Conclusion

The lessons learned about the potential for the use of digital technologies to support classroom instruction and online learning came at some cost to teachers and learners as they worked beyond the initial struggle to rapidly pivot to online learning and grow into more comfortable and effective use of technologies and new instructional approaches. To ensure the struggle was not for naught, the field needs to continue to work toward a level of stasis, a point at which the new ways of working and new technologies deployed are sustainable.

This will require overcoming several important challenges:

- the need for evaluation of innovations
- ensuring equity in the field
- new policies to accompany innovations
- additional funds needed to sustain
- expand and continue to refine innovations (Belzer et al., 2022).

Extending the airplane analogy introduced at the beginning in this paper (page 2), the flight path for a range of online, HyFlex, and hybrid learning is now becoming clearer. But the tools, knowledge, and standards that will support successful journeys for learners participating in a wide range of learning formats will need continued refinement that is only possible with adequate supports and effectively trained flight attendants (teachers), pilots (program administrators), and air traffic controllers (policy makers) who have a strong commitment to offering ever more types of experiences for an increasingly diverse group of learners who need and want to go to many different locations in many different ways.

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