WILEY

RESEARCH ARTICLE

From rapid emergency response to scaling and sustaining innovation: Adult foundational education in the time of COVID-19

Alisa Belzer | Tesa Leon | Margaret Patterson | Federico Salas-Isnardi | Jen Vanek | Corlis Webb

Department of Learning and Teaching, Graduation School of Education, Rutgers University, New Brunswick, NJ, USA

Correspondence
Alisa Belzer, Rutgers University, Graduate School of Education, 10 Seminary Place, New Brunswick, NJ 08901, USA.
Email: alisa.belzer@gse.rutgers.edu

Abstract
This article describes programmatic and instructional responses to the shutdown and the changing needs of learners that were triggered by the spread of COVID-19. It reports on the findings of a group of researchers who interviewed a convenience sample of state adult education staff, program managers, instructional leaders and supervisors, and instructors soon after the shutdown began and again about 15 months later. They indicate that responding to the initial emergency has been an impetus for meaningful innovation and a broader array of instructional and support options for learners, but challenges and questions remain about how to sustain it.

Transformation is often triggered by disorientation, when prior ways of understanding and functioning in the world are perceived as no longer effective (Mezirow, 2000). Just as in many aspects of daily life, COVID triggered such a transformation in *adult foundational education*, encompassing literacy, numeracy, and language education; high school equivalency test preparation; and workforce development (simply "adult education" for brevity throughout the article), when programs were forced abruptly to offer services remotely in mid-March 2020. Though the pandemic caused hardship and threats to health, and the pivot to remote instruction was stressful, it also created opportunities for innovation. In many cases, this innovation offered new ways of providing student support and instruction by leveraging digital technologies to make learning more flexible and personalized. The change included ideas that adult education programs and practitioners had perhaps considered but not previously prioritized. This article aims to report on these innovations that were initiated as an emergency response but many in the field now see as having permanently transformed it.

SETTING THE STAGE—DIGITAL LEARNING IN ADULT EDUCATION BEFORE COVID

The benefits of leveraging technology to extend and personalize learning have been documented in adult education programs (Rosin et al., 2017; Vanek & Harris, 2020; Vanek et al., 2019), and the linkage between literacy levels and digital problem solving has also been acknowledged (OECD, 2015). Yet, prior to the pandemic, many programs struggled to implement distance learning—that is, learning outside of a centralized, physical space designated for educational purposes—using digital formats. This was due to constraints on funding, inadequate staff expertise, apparent low learner interest, and the inertia of policy and process that often shape adult education programming. This struggle is evident in federal data on participation in distance education (e.g., NRS, n.d.; Table 4C) where, between 2016 and 2019, the number of learners held at just under four%. However small the participation in this format, it was effective; distance learners, that is learners reported in federal data as learning mostly asynchronously and online, performed either as well or better than nondistance learners (National Reporting System for Adult Education, *n.d.*; Vanek, 2022).

Low implementation of digital learning opportunities was also evidenced in survey responses collected from 773 adult educators, tutors, and program administrators between late May and early June 2020 (approximately 10 weeks after in-class instruction was suspended across the United States). As Belzer et al. (2020) reported, most of the survey respondents, administrators, and adult educators alike had been working in programs not previously offering distance education. Furthermore, the vast majority of adult educators (including those working in programs where distance education was offered) had neither previously taught in a distance education setting nor had prior training to do so (Vanek, 2022).

DIGITAL LEARNING DURING THE PANDEMIC

The pandemic has served as a laboratory that has tested, and, really, pushed the capacity of adult education practitioners and learners to engage in instruction and learning through digital technologies. Promising practices have been identified through early descriptive research (Belzer et al., 2020; Vanek & Goumas, 2021; Vanek et al., 2021). Since the onset of the pandemic, practitioners and administrators have noted that these new ways of teaching and learning through technology have reshaped administrative practices, instructional routines, and go-to resources such that "going back to the teaching that existed before the pandemic would likely cause even more disruption" (Vanek & Goumas, 2021, p. 11). This drastic, accelerated need to learn about and adopt digital technologies has resulted in a widespread transformation in adult education programs across the United States. In what follows, we highlight the range of emergency responses that emerged in the early days of the shutdown, describe how the disorientation with the shutdown led to transformation, and conclude by outlining what may be needed to support, strengthen, and sustain these changes over time.

RESPONSIVE CHANGE: RISING QUICKLY TO THE DEMANDS OF THE MOMENT, MAY AND JUNE 2020

Although some programs simply shut down operations as COVID began to spread rapidly in the United States, most took a few days or a few weeks to quickly retool in order to offer "emergency remote teaching" (Hodges et al, 2020). Beginning in late April and concluding

in late May 2020, a group of 14 adult education researchers and practitioner-leaders fanned out (virtually) across the country to determine what this looked like. They conducted 49 interviews with state adult education directors, program managers, instructional support staff, and adult educators from 20 states. This section draws on an analysis of that data collected along with survey data collected from 773 adult educators, tutors, and program administrators in May and June of 2020 (Belzer et al., 2020). They indicated that, while the responsive change presented many challenges, benefits and opportunities were also evident. Most of the interview participants saw moving to remote instruction as something that should have been widely available well before the shutdown and anticipated it continuing, at least in some way, after the emergency passed and learners could safely return to classrooms.

Belzer et al. (2020) report that 97% of the participating programs were found to have instituted some form of online learning in their programs, while 70% of participating adult educators instituted remote learning in all their programming. Programs used digital and nondigital resources and synchronous and asynchronous learning strategies to continue to address differing learner needs as best as they could. Services were offered using any online tool they could get their hands on and learn to use quickly; they reached out to learners by phone, text, and email to let them know the program would be operational and got started as quickly as possible. Where online learning was not possible, programs used mail or delivered paper packets of instructional materials. When it came to staying connected with learners, programs were inventive in every way imaginable, using whatever combination of old and new technologies was necessary including anything from mail and telephones, to texting apps and shared photos, to online learning platforms and video meeting tools.

Impact on adult educators

Adult educators quickly learned new teaching strategies, acquired and learned how to use new digital instructional tools, adjusted teaching based on learner feedback, and responded to ongoing policy clarifications. While many programs went all in on remote learning very quickly, others implemented it in phases making it a little easier for adult educators to manage and acquire new skills. Adult educators accessed what was reported as abundant professional development (PD) offerings to increase their digital teaching skills, but they were on a very steep learning curve. However, whatever the approach, adult educators generally reported being overworked and stressed. Additionally, they were challenged by boundary issues when working from home, especially if they also had children participating in distance education. Feelings of isolation and emotional fatigue were common among respondents. Yet, some adult educators felt energized as they gained new skills, rethought their practices through a new lens, and connected with learners in new ways.

The challenge of digital access

Practitioners and learners faced many obstacles in making the shift to remote teaching. Perhaps the most daunting was accessing and using digital technology. Unfortunately, most learners and many adult educators were on the "wrong side" of the digital divide, meaning they lacked digital literacy skills and access to hardware, software, and broadband. Interviewees did see that the convenience of remote teaching gave access to some

learners who had not previously been able to participate, many of whom seemed to flourish in the remote environment. However, they also saw learners struggling to learn remotely, in many cases with only a phone; very few programs were at first able to lend out devices. The struggles to deal with hardware and software issues were widespread. Programs drew on IT support wherever they could find it—for example, from the local school districts and community colleges where they were housed or from in-house self-taught experts—to help. Many adult educators were the IT support for learners. When there was no help available, program administrators and adult educators had to fend for themselves. Some found creative solutions for providing access to broadband. For example, in one case, because local school buses had hot spots, a program utilized the bus parking lots. Program staff also helped learners connect with providers who were offering free or inexpensive access during the early days of the pandemic.

Overcoming barriers to learning and administrative challenges

Learners in adult education programs also faced enormous financial, emotional, and physical challenges as the shutdown took hold. Some worked many hours more, some lost their jobs, most had to contend with children doing school at home, and many were sick or taking care of sick family members. Programs responded by stepping up the support they offered. Adult education staff used a range of technologies to go to extraordinary lengths, well beyond anything they had ever done before, to reach out to learners to offer emotional support, break down isolation, and provide information on social service resources such as food banks, emergency supplies, unemployment services, and mental health assistance. Because of this, interviewees reported that adult education became important to learners in new ways. Yet, despite the extraordinary efforts among adult educators and administrators, some barriers simply could not be overcome. Enrolment plummeted, with estimates ranging from 30% to 60% decreases, as learners made clear that they were either unable or unwilling to take part in remote instruction.

In addition to the many challenges of meeting learners' needs after suddenly shifting to remote instruction, there were administrative issues to contend with as well. One of the most pressing was the need to administer required initial assessments which had not been designed for remote use; even when they were, learners generally lacked the capacity to complete tests this way. Consequently, many programs stopped enroling new learners, while others created their own assessments so that they could continue to do so. At the time Belzer et al. (2020) published their findings, test publishers were in the process of developing procedures for remote administration that would become available in the coming months. Being able to assess incoming learners would allow programs to support recruitment, intake, and orientation efforts throughout the pandemic, but there were many questions about how this would work. Programs also adjusted funding allocations and found new sources to provide more support for classes, PD, and team-teaching opportunities for practitioners, regular contact with learners, and new services including distribution of food and emergency supplies (e.g., diapers and toiletries), and a frequently updated program webpage listing community resources and health and safety tips. They were doing their best to respond to ever-changing conditions, but administrators had many policy-related questions that emerged in the pivot to remote learning, which focused on meeting federal and/or state guidelines for use of funds and expectations for reporting enrolment and learner outcomes established prior to COVID and not yet adjusted to conditions on the ground.

Even as interviewees dealt with overwhelming change and ongoing uncertainty, they noted silver linings in the midst of crises. For example, program administrators and adult

educators talked about the good that came from being "forced" to move program services online. They saw that going online enabled learners to participate who could not before due, for example, to transportation or childcare issues. Some learners who had struggled with in-person learning "blossomed" in online instruction. Many program administrators and adult educators described a spirit of cooperation and camaraderie as well as an impressive level of creativity, adaptability, and resilience among staff. Administrators observed learner buy-in and even enthusiasm for connecting with adult educators and peers in an online environment. While they themselves had had to do it too, adult educators especially praised learners for going outside their comfort zone to embrace the relevance of online learning. State directors foresaw a changing landscape that could permanently provide online learning options not thought possible before.

The shutdown in the early days of the pandemic was definitely a disorienting dilemma that had the potential to initiate a collective transformation in adult education. Suddenly much of what had been considered normal instructional practice and programmatic structure and functioning was upended. Certainly, some practitioners struggled with new ways of working and quit their jobs, but most worked tirelessly to change almost everything about how they did their work, how they thought about teaching, learning, program management, and how they understood and responded to their learners' needs.

EVOLVING FROM EMERGENCY RESPONSE TO SUSTAINED INNOVATION, JULY–NOVEMBER 2021

About a year after our first round of interviews in the summer and fall of 2021, adult education researchers and practitioner-leaders conducted interviews with many of the original interviewees. They were recontacted to see what had happened in their states, programs, and classrooms during the intervening year as the country settled into ongoing waves of COVID surges, constantly changing conditions related to program operating status, policy updates, and the (often elusive) "new normal." Interviews with 22 respondents from 10 states were conducted. Interview data showed that the manner in which programs were more recently offering services (fully remote, in-person, or hybrid) varied depending on when the interview was conducted and where the program was located. The situation was still fluid given the dynamic nature of the virus and differing views on social distancing depending on state and local mandates. However, at the time we are writing this article, and now, several months after this second round of interviews, remote teaching now seems firmly entrenched in adult education.

By the time we conducted these interviews, many program administrators and instructional staff seemed to have experienced a transformative learning experience. This is defined, in short, as permanently changed understandings and interpretations of experience and new ways of acting triggered by a no-longer adequate framework for making sense of and operating in one's context (Mezirow, 2000). While they may not have followed the transformational process exactly as described by Mezirow (2000), they did seem to engage, in a very compressed way, in many of the transformative activities he describes. These included a shared recognition that business as usual was no longer possible; exploring new actions, roles, and responsibilities; planning a course of action; acquiring new skills; and provisionally trying out new practices and new ways of being a professional in the field.

Even in cases where programs had returned to in-person classes, they all continued to offer online and hybrid options. They had also adjusted their assessment and intake procedures. Because of the difficulty, inefficiency, and expense of conducting remote

assessment, which became available a few months into the shutdown, many programs that were still functioning primarily remotely asked learners to come onsite for intake and/or assessment, but some had figured out how to integrate remote assessment into their intake procedures. There were several examples of credentialing programs that needed to deliver demonstration and hands-on training in person. Nonetheless, most interviewees indicated that they would continue to offer remote and hybrid options, even when they could operate entirely in person, because remote instruction offers flexibility and expanded access for learners who cannot commit to regular classroom attendance or who prefer to learn online. Interviewees acknowledged that the commitment to access and flexibility stemmed from a desire to meet learners where they are, but that this had created extra costs and administrative complications yet to be resolved.

Barriers, support, and enrolment

The adult educators and administrators interviewed reported that learner participation levels were inconsistent. Not surprisingly, they continued to face many factors that challenged their capacity to participate in online classes, including those related to physical and emotional health, employment, and logistics of learning at home. Most of the challenges were COVID-related, but other contextual factors such as extreme weather also played a role.

Programs had put many additional supports in place to try to help learners initiate and maintain their enrolment. Many adult educators continued to make themselves available for hours outside of class time. Some programs hired additional staff and used texting tools to reach out to learners on a regular schedule and to provide referrals to resources and services that could help address life challenges that can interfere with learning (e.g., food insecurity, housing, and health). Learners continued to find instructional, technology, emotional, and basic needs support through their programs in ways they had not before the pandemic. In general, total enrolment was reported as still down (but not consistently), but attendance rates and learning engagement appeared to be up, and substantial progress toward learner goals was observed. It is important to note that this optimistic outlook depended on learners having access to and confidence with remote learning. Obviously, this left many learners out.

Interviewees who completed the second interview identified specific learner populations whose attendance was affected (for better or worse) by remote instruction, but those who seemed to be most affected varied by program. Rather than supporting generalizations about some populations better able than others to engage in remote instruction, the variability begs the question of whether some programs were simply better than others at connecting with and serving specific populations in this way. As programs faced a return to in-person instruction, they knew that some learners had been waiting for just that day; others only wanted remote instruction and would drop out if it did not continue. This response made it clear that programs would need to provide both options going forward if they are to maximize access for learners.

Mitigating the challenge of digital access

In recognition that many learners had to depend on cell phones, lacking easier to use devices, Wi-Fi, and the digital skills necessary to participate in remote digital learning, many programs have added questions to their intake process to understand learners' needs

in this area. Although access to devices and broadband continued to plague some programs, many indicated that they had eventually been able to use (or attain new) funds to buy and then lend out laptops, tablets, and mobile hotspots. In some locations, public hotspots were created (e.g., in parking lots or near libraries). They also took a proactive role in matching learners with opportunities to access the internet at reduced costs, an opportunity that increased over time. However, programs recognize that many learners are still dependent on smartphones for access to the internet and purposefully select technology tools that are cell phone friendly and downloadable. Other programs continued to send out or deliver instructional packets on paper. In general, programs continue to try to maximize accessibility in whatever way possible as they increasingly understand access issues for learners.

Impact on adult educators

Despite exhaustion caused by increased workloads and the emotional labor and stress brought on by constant decision-making necessary in the ever-changing COVID situation, learning challenges, and making themselves especially available to learners, interviewees indicated a sense of greater competence and comfort using technology tools than they had when interviewed in the previous year. They also took pride in their learners' progress, which they felt they had been able to support in spite of very challenging circumstances. Clearly, they felt much had been gained from the affordances of teaching online. However, interviewees expressed regret about loss of the type of contact with learners that is only possible when they are in the same physical space for extended periods over weeks and months and said it was difficult to replicate that in a remote setting.

While a sense of loss was often expressed, there was also optimism, pride, and even surprise at what had been accomplished. Although they may have entered into remote teaching reluctantly, many reported feeling they were now teaching the way they should have been prior to the pandemic. Some talked about how they have rethought much of how they teach because of the affordances and challenges of remote teaching. Others stuck closely to a "translation" approach, trying to approximate in the online setting what they were doing in the in-person classroom. Yet, most seemed to feel that remote teaching had changed them.

Many adult educators reported that their skills had been honed not only by experience gained during the year since the shutdown began, but also by a plethora of PD offerings available. They also experienced increased collegiality, which encouraged sharing, peer observations, and team teaching reported to be especially impactful in their growth. They especially appreciated when PD utilized the platforms and tools they were learning to use in their classroom. Some adult educators were at the saturation point with regard to PD, but others said they felt more would be needed as they transitioned to hybrid approaches in the coming year. Looking toward ongoing use of digital teaching and learning, others saw a need for PD that helped them get beyond "start up" to focus on high-quality remote instruction.

Adult educators were drawing on a wide range of technology tools and learning management systems (LMS) to support instruction. These choices were driven by availability and appropriateness in terms of curriculum needs, what was being used in the local school district, learner needs and skills levels, content areas, affordability, usability, and flexibility. A year after emergency instruction began, choices seemed to be made more thoughtfully and systematically, and adult educators and program managers described using digital tools in ways they felt effectively supported both learning and community building

through interactions between them and learners, as well as among learners. They also had a bigger repertoire of choices and reported using as many modalities as they could to meet the needs of learners. Interviewees observed that technology enabled instructional innovations, including more differentiated instruction and team teaching. They used these strategies to increase individualization and encourage deeper and more critical thinking.

THE CHALLENGE OF SUSTAINABILITY

The future of adult foundational education will be defined by the digital transformation set in motion by the pandemic. In the earliest days, programs simply reacted in whatever way they could to the impact of COVID as they grasped at whatever was in reach. A year later, they no longer gave the impression that they were building a brand-new plane while flying it. Instead, they were thinking about shaping, tweaking, and adapting; they were contemplating what works best instead of what works at all. The second round of interviewees expressed surprise and delight that online learning was effective, as it seemed to be so for so many learners. This reflected a significant shift in their thinking and seems to indicate a growing recognition that COVID has given the field opportunities to innovate in ways that would have been unimaginable to them before the shutdown in 2020. In other words, the interviewees seemed to be indicating that they had moved beyond one of the later stages of transformation, what Mezirow (2000) identifies as provisionally trying out new roles and activities. Rather, they were nearing the end of the process. They reflected a sense of competence and confidence as they engaged in the process of what Mezirow calls reintegration. This means moving out of the crisis brought on by a disorienting dilemma to a new way of understanding, seeing, and acting. Surely not every program or every practitioner has undergone a complete transformation, but most interviewees seemed to indicate that they were well on their way. Adult education programs are deploying technologies in ways that support learners in new ways, and many of these beneficial shifts are not bound by crises. The interviewees seemed to indicate that, with proper supports, using digital technologies can increase participation and be effective. As programs move further from the onset of the pandemic, sustaining these practices is increasingly feasible. Yet, many challenges and policy issues still must be resolved, not only to sustain the transformation, but also to continue to support its positive evolution.

A first challenge is the need for evaluation of innovations. Now that the changes made over the last 2 years have begun to feel normal and as programs begin to think about quality rather than just surviving, there is a need to evaluate and elevate the potential of remote learning approaches. It is important to understand, of the many options available, what works best for whom, and under what circumstances when it comes to online learning.

In addition to equity issues regarding access to broadband and devices already discussed, a second challenge is ensuring equitable access to educational services that meet the needs of all learners. Lack of access to educational programming is a major issue; interviewees made it clear that some learners can thrive in online instruction and others need face-to-face opportunities. Thus, a focus on equity would suggest the importance of offering both. In the long term, wholesale loss of a large number of adult education participants is untenable and unethical. Understanding how to balance the broad range of preferences and access to remote learning with those who do not want to or cannot participate this way is critical. Finding a way to "do hybrid right" will contribute to greater access and equity. Learners should play a key role in both evaluation and identifying and responding to equity issues.

Revising or developing new policies to accompany innovations is another challenge. Policy adjustments need to be made for assessment, attendance, and use of acceptable platforms and tools. Assessing adult learner outcomes in learning, employment, or credentialing has shifted dramatically. Given how high the stakes are for assessment in the adult education context where accountability is tightly tied to program funding, having consistent and practical policies in place for remote assessment is imperative. Policies on attendance—whether online, in-person, or hybrid—need to be reexamined and adjusted, moving forward. Articulated policies on what learning platforms and tools can be used and what limitations programs may face in selecting them also require policy adjustments, depending on how centralized a state is and the extent to which it evaluates acceptability.

An additional, and major, challenge is the additional funds needed to sustain, expand, and continue to refine innovations. Interviewees reported marshaling Coronavirus Aid, Relief, and Economic Security Act (CARES) funds and other extra money that came into the system as a result of COVID to support initial responses to the crisis. Interviewees made clear that maintaining the intensified level of service and sustaining innovations begun during emergency remote instruction will be costly. Thus adult education needs to be able to get beyond thinking of an initial "COVID response" to more generally considering how to fund and use technology and innovative approaches in ongoing, effective, and productive ways. Funding will need to be reconfigured; availability of funding may point to serving fewer learners with more intensity in synchronously online and face-to-face approaches or to engaging learners more broadly and asynchronously. The experiences of serving learners effectively during the pandemic have pointed out the need for funds for initial purchase and ongoing maintenance of hardware, software, instructional and instructor supports, wraparound services, smaller class sizes, continued PD, and evaluation.

CONCLUSION

Meeting these challenges will continue to test and refine the resourcefulness and creativity of adult education leaders and policymakers. Evaluating and elevating the potential of remote learning approaches show promise to strengthen the field's capacity to serve learners well. The growing recognition of opportunities to innovate may contribute to greater access and equity. Revising or developing new policies to accompany innovations will ensure that programs and staff can continue transforming their services without sacrificing accountability or funding. Adequate funding will help ensure these opportunities become reality. Sustaining and then continuing to grow and refine innovations begun during a time of crises has the potential to support, strengthen, and sustain adult foundational education as the field evolves during and beyond the pandemic era. Transformation means there is no going back (Poutiatine, 2009); now the challenge is to continue to move forward in expanding the access and quality of educational opportunity for all adult learners, whether they access it remotely, in person, or in a hybrid format.

REFERENCES

Belzer, A., Leon, T., Patterson, M., Rhodes, C., Salas-Isnardi, F., Vanek, J., Webb, C., & Willson-Toso, B. (2020). *COVID-19 rapid response report from the field*. Proliteracy. https://proliteracy.org/Portals/0/pdf/Research/COVID-19/COVID-19-Report.pdf?ver=2020-07-31-090141-130

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EduCause Review*, https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress* (1st ed.). Jossey-Bass.

National Reporting System for Adult Education. (nd). *Aggregate reports by year, 2016–2020*. U.S. Department of Education. https://nrs.ed.gov/rt

OECD. (2015). *Adults, computers and problem solving.* https://doi.org/10.1787/9789264236844-en

Poutiatine, M. I. (2009). What is transformation?: Nine principles toward an understanding of the transformational process for transformational leadership. *Journal of Transformative Education, 7*(3), 189–208. https://doi.org/10.1177/1541344610385249

Rosin, M., Vanek, J., & Webber, A. A. (2017). How investment in technology can accelerate collective impact in adult learning. World Education. https://edtech.worlded.org/resources/investment-in-technology/

Vanek, J. (2022). Supporting quality instruction: Building teacher capacity as instructional designers. *Adult Literacy Education, 4*(1), 43–48. h ttps://doi.org/10.35847.

Vanek, J., & Goumas, J. (2021). *Highlighting innovative practitioner uses of digital technologies in adult foundational skills instruction.* https://sites.gsu.edu/csal/

Vanek, J., & Harris, K. (2020). Digital literacy and technology integration in adult basic skills education: A review of the research. *ProLiteracy*, https://www.proliteracy.org/briefs#TechnologyIntegration

Vanek, J., Rosin, M., Silbert, J. H., Tashjian, K., & Webber, A. A. (2019). Technology, innovation, and adult career pathways. *COABE Journal: The Resource for Adult Education*, (November), 124–132. https://doi.org/10.1002/ejoc.201200111

Vanek, J., Webber, A. A., Kallenbach, S., Singh, N., Uvin, J., González, C., & Crowe, A. (2021). Promising practices for adult remote ESOL. *World Education*, https://edtech.worlded.org/wp-content/uploads/2020/03/esol-promisingpractices-1.pdf

AUTHOR BIOGRAPHIES

Alisa Belzer, PhD, is a Professor at the Rutgers University Graduate School of Education. She is Program Coordinator for the EdM in Adult and Continuing Education and coeditor of the Adult Literacy Education: The International Journal of Literacy, Language, and Numeracy.

Tesa Leon is a doctoral student in the Leadership for Change Program at Fielding Graduate University. She also consults with adult education programs to integrate math and numeracy into adult education programs and curriculum to improve completion rates.

Margaret Patterson, PhD, Senior Researcher with Research Allies for Lifelong Learning in the Washington, DC, metro area (www.researchallies.org), partners with nonprofit organizations, postsecondary institutions, and state agencies to apply research and conduct evaluations that support adult educators and learners. She administered and taught in adult education programs in Nebraska, Nevada, Kansas, and Virginia, and provides professional learning on research and evaluation throughout the United States.

Federico Salas-Isnardi is Director of the Mayor's Office for Adult Literacy in Houston, Texas, where he focuses on overcoming the systemic barriers that keep adults from accessing quality opportunities. Federico is a certified diversity trainer specializing in social justice education and he has worked in adult ESL and literacy for 35 years.

Jen Vanek, PhD, is the Director of Digital Learning and Research at the EdTech Center @ World Education. She is a researcher and teacher educator focused on the topics of digital literacy, distance/online education, and adult English language learning.

Corlis Webb, EdD, is a freelance instructional designer developing course curriculum in different industries including social services, transportation, education, and as a government contractor. She has volunteered in adult literacy programs teaching ESL,

Pre-GED, and citizenship classes for many years and as an adjunct teacher in the local school system in her community.