Leveraging Technology in Adult Education

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At the Office of Adult Education (formerly the Mayor's Commission on Literacy), we are excited about technology and its' potential to advance our field, although we have seen the challenges firsthand. We are pleased to add to the discussion by sharing the lessons we have learned from *hanging out, messing around, and geeking around* with tech. (https://mitpress.mit.edu/books/hanging-out-messing-around-and-geeking-out)

Our perspective on technology in adult education is based on the lessons we have learned from the programs we have developed and supported, and, from our own experiences as lifelong learners. Many of us began our journey to adult education as teachers, volunteer tutors, students, and English language learners. We have rich and multi-faceted experiences with technology in settings like the classroom, ESL programs, at home, and at our jobs. All of this has greatly informed our perspective on the incredible potential—and challenges—of technology in adult education.

As a city agency, our office works with over 100 adult education and ESL providers across Philadelphia. While some adult education providers have been reluctant to adopt education technology, we were one of the first organizations in the U.S. to bring facilitated online learning to adults reading at a low to intermediate level. We also currently offer several online courses. OAE's *my*PLACE℠ Online is contextualized in three high priority jobs in the City, available to residents of Philadelphia and incarcerated adults. Our Digital Skills, Bicycle Thrills course is a collaboration with Philadelphia's Indego bike share, combining digital literacy with urban biking skills. *my*PREP℠ is for adults at an 8th grade level looking to brush up their skills to help them take standardized assessment tests for job training, apprenticeship programs, and college. These programs have helped learners improve their skills on their own time, while offering the support of online facilitators, who provide feedback and motivation.

As an organization, OAE has a long history of working with constantly evolving technology. Since 1988, we have produced a Technology in Adult Education Conference, where hundreds of practitioners convene to discover best practices. In November 1992, we began The Power Learning Project. This tested the potential of home-based computer assisted instruction coupled with classroom instruction for adults, and was funded by the National Institute for Literacy. Since 2013, OAE has led KEYSPOT, a network of public access technology centers in low-income communities in Philadelphia. KEYSPOT has given us an on-the-ground perspective about the necessity for digital literacy trainings as well as access to technology. OAE also offers online and blended, cohort-based, tutor trainings. Our tutor trainings leverage the flexibility of online learning,

and the chance to help volunteers understand technology as a tool for instruction.

Access to the Internet

As we advocate at a local, state, and national level for more affordable Broadband, we must also explore online learning options that do not assume learners have an internet connection readily available. We know that those who stand to benefit the most from access to broadband often are left behind due to barriers such as cost and location. While nearly three-quarters of Americans have home broadband service today, seniors, racial minorities, low-income households and those with lower levels of education are less likely to have broadband at home (Pew, "Internet/Broadband," 2017). Through OAE's management of the KEYSPOT Network, we support organizations that provide unrestricted open access to the Internet while promoting programs that provide low-cost, in-home Internet or technology equipment. Adult educators must continue to build awareness about the digital divide, and push for more affordable options for adult learners.

While advocating for more affordable Broadband is critical, a small and growing number of tech companies, public institutions, and non-profits are developing programs that circumvent this barrier. The company Cell-Ed provides offline lessons on literacy, language and job skills for cell phones, allowing students to listen to pre-recorded lessons and assessments by dialing a number to which they can text answers back. Community Action, Inc. of Central Texas integrated Cell-Ed into their ESL course with great success for learners like Albina Herrera, a bus driver who used the Cell-Ed product during spare time on the job to improve her English writing skills (Digital Promise, "A developer," 2015).

In 2013, Providence Community Library (PCL) utilized Mobile Beacon's 4G device donation program to lend out mobile hotspots to patrons who lived in neighborhoods with low rates of home broadband. Other libraries have offered similar services, and in April of 2017, Philadelphia City Council proposed hearings on the feasibility of the Free Library of Philadelphia "lending out" mobile hot spots to their patrons. It is with certainty that this trend will continue, and not just here in Philadelphia.

One-to-One Device Access

Combined with options that do not assume internet access will always be readily available, low-cost mobile devices are a powerful tool for adult learners and can serve as affordable one-to-one devices.

Walk into orientations for any OAE online class, and the first question from our learners is always the same: "Can I do this on my smartphone?" In fact, our learners express the most interest in receiving mobile devices through programs like Federal Lifeline Assistance, as opposed to opportunities for laptops or desktop computers.

Low-cost smartphones are becoming more available as the market shifts and software improves. At costs as low as $39.99, smartphones are becoming increasingly attainable for adult learners. While infrastructure that allows K-12 programs to provide one-to-one devices such as iPads or laptops for all learners is out of reach for many adult education programs, it is also reasonable to assume that many adult learners own a smartphone—and that this trend will only increase.

What we observe locally echoes a growing national trend. Mobile usage continues to grow at an astronomical pace, with last year marking the first time in history that smartphone and tablet Internet usage surpassed desktop or notebook usage (Heisler, 2016). Faster network speeds and greater mobile capability will add to this shift in Internet consumption, and there is no denying that mobile is an important part of the future. Each year the barrier of smartphone capabilities is lowered as smartphone screens get larger and mobile app development companies grow.

Of course, for adults to benefit from mobile learning tools, there must be a range of high-quality products on the market. While thousands of education apps are available for download in the Android and Apple stores, only a fraction of these

are geared at adult learners.

The Adult Literacy XPRIZE is a global competition, funded by the Barbara Bush Foundation and sponsored by Dollar General, challenging teams to create mobile learning apps designed to improve the literacy skills of adult learners. OAE is coordinating efforts in Philadelphia to have over 3,500 adult learners test the apps. A key goal for XPRIZE is encouraging more developers to create apps for the adult learner market—and to win, the apps will most likely need to work on low-cost devices without relying on a constant internet connection.

In addition to the over 50 apps worldwide competing for the Adult Literacy XPRIZE, Digital Promise is also committed to encouraging more developers of mobile apps break into the adult learning market. Digital Promise identifies adult literacy beacons across the U.S. that serve as best practices for technology in adult education, while providing resources and support to developers and entrepreneurs interested in entering the untapped adult literacy market. We need more organizations like XPRIZE and Digital Promise to join the small but promising intersection between adult education and mobile applications.

The Role of Schools and Programs

We do not believe that education technology will negate the role that physical schools and classrooms play in adult education. As practitioners, we know that learning is a social process that flourishes through interaction with others. In-person adult education centers have staff such as learning coaches, job developers, and caseworkers that can provide a more holistic approach to addressing needs like employment, housing, and emotional and physical well-being. Technology will never replace face-to-face interactions with teachers or caseworkers, just as emoji will never replace a hug.

At the same time, research shows that a combination of face-to-face and online instruction can be more effective than either alone. One meta-analysis found that students in blended instructional programs performed better than those taking the same courses as face-to-face or online only (Lloyd-Smith, 2010). Successful blended models were found to accommodate the active schedules of learners through the flexibility of asynchronous learning while providing 'live' interactive discussions. The development of relationships between students and instructors was crucial to retention and achievement in these blended courses. Instructors ensured the success of students who had little to no experience with prior online learning by outlining and modeling the technology that would be used throughout the course.

Whether through a mobile app or in another format such as a Learning Management System like Canvas or Blackboard, technology undeniably allows teachers to do more for students outside of office hours. These tools can also foster new forms of learner interaction, as learners engage in online discussion posts or chat forums to mimic classroom interactions. Some learners may carry negative connotations to their past classroom experiences and may find communicating online more comfortable. Most of our learners juggle family lives and careers with their education, making online learning ideal for the spare moments they can find in their daily lives.

Meaningful Interactivity

Making technology successful as a learning tool is tantamount to the best traditional classroom learning: meaningful, relevant experiences that require learners to focus on higher order thinking skills. In our *my*PLACE[SM] Online courses, students learn basic math skills and apply them to complex, real-world situations such as packing a truck with the ideal quantities and load of materials, or giving the right concentration of medicine to patients. Students also research and analyze information, which is then used to develop a personal career and educational pathway. Our Digital Skills, Bicycle Thrills course helps learners apply digital skills such as navigating with online maps, to creating a route through Philadelphia using the safest and fastest bike routes, and testing the route they chose during a bike ride.

Conclusion

As educators, we grapple with how technology impacts our work and the lives of our learners. We are adult education practitioners who—like many reading this—are increasingly tech-dependent. We struggle with how to use the latest mobile phones and how to best incorporate technology into the lives of adult learners. We have experienced the evolution of technology in our field for more than two decades. At the same time, barriers such as lack of affordable internet and the scarcity of online educational products geared at adult learners serve as continual reminders of how far we must go. We hope that when we look back 10 years from now, we can celebrate the progress and investment that has been made in the exciting field of adult education and technology.

We know that large-scale investments into the adult education system are needed, yet programs must be willing to experiment with different online learning options and mobile technologies that stretch our dollars in the meantime. Research and successful examples of the use of technology in adult education will draw attention to a need that is often overlooked. Just as we adapt to new learning theories and instructional techniques, we must adapt to innovations in educational technology. We are determined to make the case that investing in adult education pays. ❖

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References

Digital Promise (2015, February 18). *A developer and a CBO make a difference in adult education*. Retrieved from http://digitalpromise.org/2015/02/18/the-anatomy-of-a-solution-how-a-developer-and-a-cbo-are-making-a-difference/

Heisler, Y. (2016, November 2). *Mobile internet usage surpasses desktop usage for the first time in history.* Retrieved from http://bgr.com/2016/11/02/internet-usage-desktop-vs-mobile

Lloyd-Smith, L. (2010). Exploring the advantages of blended instruction at community colleges and technical schools. *MERLOT Journal of Online Learning and Teaching, 6*(2), 508-515.

Pew Research Center (2017, January 12). *Internet/Broadband fact sheet.* Retrieved from http://www.pewinternet.org/fact-sheet/internet-broadband/