



Supporting Teachers and Learners in Technology-Supported Instruction

Background and Context

The [Writing in Adult Secondary Education \(W-ASE\)](#) Project was designed to address a two-fold challenge in adult education: how to help learners develop both digital writing skills and their ability to write effective argumentative essays. Drawing on an evidence-based curriculum originally designed for college students who struggled with writing, the W-ASE team adapted lessons for adult learners at the National Reporting System for Adult Education (NRS) levels 2–6 (high beginning through advanced literacy skills). The intervention included 16 lessons delivered over two to three months by authentic teachers at adult education programs. Teachers were supported through professional development training on the curriculum and then coaching throughout the intervention. The curriculum and the professional development model were refined over a series of field trials. In the pilot study, writing gains of students in classes using the refined writing curriculum were compared to students in business-as-usual classrooms across multiple adult education programs in a Southeastern state.

**W-ASE**

The Challenge of Digital Literacy in the Classroom

From the outset, the project encountered challenges related to the digital literacy of both teachers and learners. Many teachers needed to learn the technology skills required to embed technology into their writing instruction. Instructors were expected to move fluidly between presenting lesson content on PowerPoint slides to then modeling digital writing in Google Docs. Many instructors had limited experience using Google Docs themselves. It was often a challenge to model the writing process to their students while using unfamiliar technology.

At the same time, many learners had limited prior exposure to computers and word processing applications. Some had never opened a document or typed an essay before. Even though most learners possessed smartphones and had Gmail accounts, few had used application tools, such as Google Docs. Many of our students needed explicit instruction on how to find and use Google Docs to write digitally. Teachers reported that continued technical support and repetition of modeling digital skills was often required and beneficial for their students to be able to successfully focus on the content of the instruction (how to write argumentative essays).

The gaps in both teacher and learner skills slowed implementation and created additional instructional demands not originally anticipated in project planning. However, the research team also confronted external obstacles. For example, by the time our project was launched with our students, the technological landscape from which we had made our plans had shifted. Microsoft Word had evolved from downloaded software to a cloud-based application requiring individual user subscriptions. This made the team's original plan to teach and assess Microsoft Word skills less relevant, particularly since some of our sites lacked the funds to purchase user subscriptions. The research team therefore pivoted to a free and easily accessible word processing application, cloud-based Google Docs. This pivot forced the team to adapt quickly, without the benefit of dedicated technical expertise or resources.

Strategies for Building Capacity and Adapting Technology

We responded to our challenges by embedding explicit digital literacy instruction into both the curriculum and professional development supports. Initially, resources were written as appendices to the curriculum, but these evolved into short instructional videos demonstrating basic tasks such as how to open a Google Doc or share a file. Teachers could view these videos independently or use them directly with learners.

To ensure that sites were equipped to implement a digital intervention, we developed a checklist to assess each site's equipment, connectivity, and technical conditions. Site visits allowed researchers to test run the applications, evaluate bandwidth, and anticipate potential issues. These assessments revealed wide variation: some sites had desktops and computer labs, while others relied on loaned laptops from the project. Internet connections were often unreliable, leading the team to provide mobile Wi-Fi devices in certain cases. This flexibility and hands-on support helped prevent technical barriers from derailing classroom implementation.

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Another layer of support addressed the need to monitor fidelity of implementation. Teachers were initially asked to video record their lessons for coaching and evaluation purposes, but many struggled with the logistics of recording and uploading videos. Problems ranged from forgetting to press record to blocking the camera view or encountering file-size limitations. Ultimately, the team shifted responsibility for video capture to the research staff and invested in an iPad mounted on a rolling stand, improving video quality and reliability while easing the burden on instructors.

Outcomes and Lessons Learned

Over successive rounds of field testing, the W-ASE project learned that professional development for technology-supported instruction cannot assume that teachers will have digital skills and familiarity with the tools to be used in

the study. Instead, it must explicitly address both the digital skills that teachers will need to deliver lessons and the skills they will be expected to teach their learners. Similarly, sites require careful technical assessment to ensure that infrastructure, devices, and connectivity are sufficient. Even then, flexibility is essential, as technology and platforms change quickly, and project plans must adapt accordingly.

Key Takeaways

The W-ASE experience demonstrates that implementing a technology-supported curriculum in adult education requires a dual focus on pedagogy and digital literacy. Teachers need sustained professional development that builds their own comfort with digital tools while equipping them to support learners with limited experience. Researchers must also account for infrastructure and resource variability across sites and be prepared for ongoing technical adjustments. Planning for equipment, internet access, and unexpected expenses is not optional—it is central to ensuring that technology-enhanced interventions can succeed in real adult education classrooms.