

**WORLD EDUCATION**

— A DIVISION OF JSI

# **DIGLIT INITIATIVE**

**Phase II - Report**

**Submitted to the City of Boston Mayor's Office of Workforce  
Development, Worker Empowerment Cabinet**

**November 2023**

# Acknowledgments



City of Boston  
Worker Empowerment

The [Office of Workforce Development \(OWD\)](#) works toward the full participation of all Boston residents in the city's economic vitality and future. It connects low-income residents with job training and employment

opportunities and promotes lifelong literacy and educational pathways.

The [Digital Literacy Initiative \(DigLit\)](#) is an initiative of the City of Boston Mayor's Office of Workforce Development and the Worker Empowerment Cabinet, designed to increase the digital skills and resiliency of Boston residents. DigLit was made possible by funding through the City of Boston's American Rescue Plan Act (ARPA) funds. In 2023, the project was awarded an additional \$1 million from Congresswoman Ayanna Pressley's Community Project Funding. This funding will be used to expand the initiative.

The City of Boston [Adult Literacy Initiative \(ALI\)](#) is a consortium of adult literacy programs throughout the City of Boston. ALI is led by the City of Boston's Worker Empowerment Cabinet in collaboration with the Massachusetts Department of Elementary and Secondary Education's Adult and Community Learning Services (ACLS) unit. Comprising twenty-five education providers, ALI serves about 3,500 diverse students annually with a wide range of programs, including literacy, high school equivalency, job skills, and English for Speakers of Other Languages (ESOL) classes.

Below is a list of the programs that participated in Phase II of the DigLit Initiative. Each program made substantial progress in recognizing and addressing gaps in its approach to integrating technology and digital literacy, and all programs developed edtech routines to effectively integrate technology into instruction. A collection of the created routines can be found in the [Boston EdTech Strategy Routine Library](#).



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EDUCATION**

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Education Programming builds transferable skills for life  
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**Boston Chinatown  
Neighborhood Center**  
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- [El Centro Adult Education](#)
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**WORLD EDUCATION**  
— A DIVISION OF JSI

World Education (WE) is a division of JSI, a leading global development nonprofit organization dedicated to improving people's lives around the world through greater health,

education, and socioeconomic equity for individuals and communities.

With decades of experience, WE collaborates with private, public, and community organizations to support and lead solutions to advance equity and economic opportunity. In the United States, WE is a leader in providing capacity-building services to the U.S. Department of Education and state-level adult education and workforce development systems through innovative demonstration projects, professional development, research, and targeted technical assistance. Our [Behavior Initiative](#) integrates behavioral thinking across the organization and links with other sectors to co-create behavior-integrated strategies that spur people to action and ensure lasting change.

WE's expertise includes implementing a coaching approach for programmatic and institutional change, whether coaching community college leaders on developing data-informed strategic action plans to improve equitable outcomes for [students of color](#) and [single mothers](#), strengthening adult education programs to boost their effectiveness in serving adult learners by providing responsive and customized professional development, convening cross-state

leadership to facilitate sharing and collaboration via the [New England Literacy Resource Center \(NELRC\)](#), and supporting state agency leads on digital transformation, such as through the [IDEAL Consortium](#) and the [Workforce EdTech](#) initiative.

WE is a leader in advancing digital equity, as evidenced by its leadership of the [Digital Resilience in the American Workforce \(DRAW\)](#) initiative for the U.S. Department of Education and the [Transforming Immigrant Digital Equity \(TIDE\)](#) project, which is piloting an equitable ecosystem model for immigrant and refugee inclusion and ESOL learning.

WE's technical assistance initiative in Boston for adult education programs on increasing digital literacy involved a rigorous process of program self-assessment, action planning, and curriculum development. This report describes the activities, approach, outcomes, and recommendations resulting from our work from February 2022 to September 2023, leading twenty-five Adult Literacy Initiative (ALI) member programs through digital needs assessment, action planning process, identification of tech integration opportunities, and edtech routine creation and implementation. Special thanks are extended to our dedicated coaches and advisors for their guidance and expertise throughout the process: Sandy Goodman, Kathleen O'Connell, Diana Satin, Shirley Doan, Jerry Yamashita and Catalina González.

Recognizing that digital equity is critical to all aspects of community and family health and wellbeing, access to education and employment opportunities, and civic engagement for Boston residents, we are proud of the role we have played in supporting the ALI programs through this process.

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## Background and Overview

The [Digital Literacy Initiative \(DigLit\)](#) is a multi-phase intervention that started with a facilitated needs assessment and action planning process in Phase I (2022), followed by one-on-one technical assistance and financial resources in Phase II (2023) to assist adult education providers in integrating technology into instruction.



DigLit is an initiative of the City of Boston Mayor’s Office of Workforce Development, Worker Empowerment Cabinet, designed to increase Boston residents' digital skills and resiliency. The initiative was made possible by funding through the City of Boston's American Rescue Plan Act (ARPA) funds. In 2023, the project was awarded an additional \$1 million from Congresswoman Ayanna Pressley’s Community Project Funding.

To date, DigLit has completed two phases. In Phase I (February to July 2022), World Education designed two tools: a [Needs Assessment](#) and an [Action Plan](#) template to assist twenty-five adult education programs in conducting a self-assessment and plan for their digital literacy programming and infrastructure. Programs were guided through the needs assessment process, enabling them to identify needs to enhance their digital literacy capacity. With the guidance of coaches, adult education programs subsequently crafted action plans to tackle their priority needs, outlining the required inputs, anticipated outputs, and expected outcomes, thus establishing a framework for measuring their progress and achievements.

At the end of Phase I, OWD evaluated the needs assessment and action plans developed by programs and conducted surveys and interviews to guide their next steps. Overwhelmingly, programs sought to “expand opportunities for learners to have meaningful engagement with technology in a supportive learning context, whether in-person, remote, or hybrid” and saw “the need to create more effective methods for delivering digital skills.” Most programs agreed that “integrating technology into the curriculum improves learners’ digital skills better than a standalone literacy component.”

In reviewing the action plans created by programs in Phase I, we also observed that seventeen goal statements explicitly addressed the need for integrating digital skills into curriculum and instruction. Some goal examples include:

- Review their curriculum to integrate digital literacy at every level, focusing on best practices for integration of digital literacy
- Develop a standards-based curriculum to integrate digital literacy skills into all levels of English for Speakers of Other Languages (ESOL) and adult basic education (ABE) classes and workforce development training programs
- Implement a digital literacy curriculum that is aligned with an established standards-based framework that addresses the essential hardware, software, and informational skills students need to be professionally and personally successful in the digital age
- Promote professional development intended to improve digital skills instruction
- Seek to provide opportunities for students to obtain and practice digital skills

In response to these findings and observations, Phase II (February to September 2023) was launched. Programs worked with coaches, who, in the majority of cases, were the same who supported their program in Phase I, to identify areas for tech integration, expand their expertise in edtech tools, explore rubrics to evaluate these for classroom use, and armed with these new resources and skills, embark on the development of edtech routines<sup>1</sup>.

The creation of these edtech routines aimed to address previously identified needs, such as providing meaningful opportunities for learners to engage with technology in a supportive environment and implementing effective methods and best practices for delivering digital skills.

"edtech routines are general, repeatable edtech activities that can be leveraged regularly regardless of context or content and provide predictable experiences for learners."

[Digital Skill-building by Design: The EdTech Integration Strategy Toolkit](#)

Throughout the process, coaches provided support, meeting with programs at least twice a month, with additional opportunities to meet as needed. In addition to coaching and technical support tailored to program needs, program staff gained valuable expertise in developing edtech routines and benefited from having access to a repertoire of routines created by their peers, enabling them to incorporate technology seamlessly into their teaching, saving time, and inspiring new educational tech tool integration in the classroom.

Phase II also incorporated digital badges for program staff as a way to validate their newly acquired skills and to recognize their work on the project. Additionally, in partnership with the [Behavior Initiative](#) at JSI, we explored, identified, and [visualized](#) the key factors involved in the effective integration of technology into the curriculum and determined whether instructors have

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<sup>1</sup> [Digital Skill-building by Design: The EdTech Integration Strategy Toolkit](#)

acquired the necessary knowledge and skills to continue to integrate technology into the curriculum beyond the intervention period. Phase II concluded with the unveiling of a dedicated [website](#) that serves as the central hub for the edtech routines developed by Boston programs, providing a centralized and accessible platform for these resources. This platform facilitates sharing expertise among peers, empowering instructors to save time by leveraging established practices. Programs can choose to adopt, adapt, or advance these practices, fostering collaboration, enhancing teaching strategies, and utilizing proven resources.

## Project Blueprint: Design Framework and Strategies

### Summary of Activities in Phase I

In 2022, coming out of the pandemic, the Office of Workforce Development engaged World Education to provide individualized support and coaching to Boston adult education programs and to conduct a digital needs assessment and action plan process. With support from World Education, twenty-five programs completed a self-assessment tool to evaluate their

- technology infrastructure,
- technology integration into service delivery,
- professional development on the effective use of technologies for service delivery,
- and student support and training.

Subsequently, the programs developed action plans to address the identified gaps and needs in the provision of digital literacy and technology-enabled instructional services. Some of the gaps identified during Phase I included a lack of

- digital skills assessment protocols,
- orientation processes detailing tech tools that would be used during instruction,
- online learning readiness self-assessment tools,
- digital readiness onboarding protocols,
- and the need to adopt and integrate a digital skills framework into the curriculum.

### Coaching

In Phase I, the process was designed to be a collaborative effort that engaged each program's internal stakeholders, such as instructors, directors, and tech support staff. The aim was to forge an internal dialogue that would yield a comprehensive and accurate description of the current situation at programs and an understanding of program needs. At the start of the project, each program was asked to designate a staff person to lead the program's [Digital Literacy Needs Assessment](#) and [Action Plan](#) development with coach support. The designated lead was then encouraged to engage instructors, advisors/coaches, tech coordinators, and facilities managers

in the needs assessment and action planning process to gain a broad perspective on their program's technology capacity and needs.

The programs participating in the initiative were divided into five groups or cohorts based on their size and focus, which included ABE or ESOL. This approach recognized the unique needs and characteristics of different program types and ensured that the coaching provided was relevant and effective. By aligning coaches with specific cohorts, the initiative aimed to foster a deeper understanding of each program's context and facilitate more targeted and impactful support throughout the project.

Each program was assigned a coach who not only provided support throughout the needs assessment and action plan process but also brought expertise in the field of adult education, digital skill development, ESOL, and/or workforce development. This combination of coaching support and specialized knowledge was crucial in helping programs bridge knowledge gaps and ensuring that programs received guidance and insights specific to their needs, ultimately enabling them to navigate the complexities of tech integration more effectively.

Typically, coaches met one-on-one with the designated project lead, but sometimes, they met with the entire team working on the project. Between mid-April and late July, coaches met with each of their assigned programs four to six times to check on their progress, ask clarifying questions, and help them maintain momentum and accountability to the project activities and timelines. In addition, coaches provided verbal and written feedback to programs on their Digital Needs Assessment and Action Plan. They responded to questions and emerging ideas in real time by sharing links to resources and information.

The coaching approach, which is an essential element of this initiative, is based on the recognition that coaching is a transformational professional development tool that allows for focused skill-building, valuable knowledge-sharing, and collaborative problem-solving.

### **Community of Practice and Professional Development**

World Education coaches offered two customized professional development workshops during which participants recorded their ideas in a Padlet that all could use as a reference to inform their action planning. In addition, curated resources were shared in coaching sessions, compiled into a document, and shared with the whole project via the community of practice.

This facilitated process provided a deeper understanding of the programs' needs and goals, individually and collectively, paving the way for future targeted strategies, funding, and interventions.

## Summary of Activities in Phase II

At the request of OWD, this phase was specifically designed to support technology integration into the curriculum. The same twenty-five programs that participated in Phase I were invited to participate in Phase II voluntarily. Additionally, participating programs each received \$43,000 in flexible funding to support the implementation of action plan goals established in Phase I.

### Tech Integration into Curriculum

At the end of Phase I, OWD evaluated the needs assessment and action plans developed by programs and conducted surveys and interviews to guide their next steps. Overwhelmingly, programs sought to “expand opportunities for learners to have meaningful engagement with technology in a supportive learning context, whether in-person, remote, or hybrid” and saw “the need to create more effective methods for delivering digital skills.” Most programs agreed that “integrating technology into the curriculum improves learners’ digital skills better than a standalone literacy component.”

In reviewing the action plans created by programs in Phase I, seventeen goal statements explicitly addressed the need for integrating digital skills into curriculum and instruction. Some goal examples include:

- Review their curriculum to integrate digital literacy at every level, focusing on best practices for integrating digital literacy.
- Develop a standards-based curriculum to integrate digital literacy skills into all levels of ESOL/ABE classes and workforce development training programs.
- Implement a digital literacy curriculum aligned with an established standards-based framework that addresses the essential hardware, software, and informational skills students need to be professionally and personally successful in the digital age.
- Promote professional development intended to improve digital skills instruction
- Seek to provide opportunities for students to obtain and practice digital skills.

The [Adult and Community Learning Services \(ACLS\)](#) unit, part of the Massachusetts Department of Elementary and Secondary Education (DESE), also establishes that “an essential component of a high-quality adult education program is the integration of digital literacy into curriculum and instruction.”

As a result of the observed program needs and goals proposed by programs in Phase I, Phase II aimed to support tech integration into the curriculum, broadly defined as the totality of student experiences that occur in the educational process.

The ultimate goal of technology integration is the effective use of tech tools for teaching and learning in a way that becomes an integrated, standard practice rather than the use of tech tools being taught in a separate class. To achieve this goal, World Education offered programs

personalized coaching and technical assistance as they developed edtech routines<sup>2</sup> and compiled those routines into a customized [edtech strategy routine library](#) that programs can use moving forward.

## Project Design

Phase II of the project consisted of three stages: define, design, and apply. The project's first stage, or “define,” involved meetings between programs and coaches to identify opportunities for integrating technology into their curriculum. To start the process, each program was asked to designate a staff person to lead the program’s development of edtech routines with support from World Education coaches. World Education assembled a team of coaches who supported program participants to achieve the following two goals: a) review the action plans and goals to identify technology integration opportunities during intake, onboarding, orientation, instruction, or evaluation, and b) develop edtech routines to apply regularly into instruction and program practices. During this stage (February to April 2023), programs worked with their coaches, who, in the majority of cases, were the same coach who supported their program in Phase I, to identify areas for tech integration, expand their expertise, and explore resources to develop structured, evidence-based routines employing various edtech tools.

Once opportunities for tech integration were identified, the “design” stage (April to July 2023) began with a webinar that introduced the process of developing edtech routines. Programs worked with their coaches during this stage to create edtech routines that addressed their specific needs, requirements, and instructional context, using a template for guidance. Each routine was connected to evidence-based strategies, ensuring alignment with best practices.

During this stage, virtual open office hours were available through Zoom, allowing for convenient drop-in sessions where coaches could address immediate questions or concerns. The final stage, “apply/reflect” (August to September 2023), allowed programs to test, implement, and refine the routines and offered an opportunity for programs to reflect on the lessons learned throughout the project.

## Edtech Routines

Given the overarching goal to enhance opportunities for meaningful technology engagement in various learning contexts and the recognition of the need for more effective methods of delivering digital skills, Phase II was designed to provide technical assistance and coaching to programs to effectively integrate technology into the curriculum via the development and implementation of edtech routines. Curriculum was broadly defined as the totality of student experiences that occur in the educational process, including intake, onboarding, orientation, instruction, and evaluation – not instruction only.

Building upon World Education’s initiatives, such as [CrowdED Learning](#) and the [EdTech Integration Strategy Toolkit](#), created by the [EdTech Center @ World Education](#), the project embraced the concept of edtech routines as consistent and impactful practices for seamlessly

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<sup>2</sup> [Digital Skill-building by Design: The EdTech Integration Strategy Toolkit](#)

incorporating technology into the curriculum. Edtech routines are instructional or program practices in which teachers use the same digital tools regularly and repeatedly for the same

"these routines all have underlying evidence-based strategies, meaning they are leveraging practices for instruction that are known to be effective for adult learners."

[Digital Skill-building by Design: The EdTech Integration Strategy Toolkit](#)

purpose within a lesson to support consistency and digital skill-building that aligns with the content of the class.<sup>3</sup> These routines offer structured and recurring opportunities for

learners to develop digital awareness, skills, agility, and confidence in applying these skills to diverse digital contexts.

According to the *Playbook for Fostering Digital Resilience through Instruction in Adult Education*, a resource created as part of the [Digital Resilience for the American Workforce \(DRAW\)](#) professional learning initiative funded by the U.S. Department of Education's Office of Career, Technical, and Adult Education, edtech routines "provide learners with the opportunity to use the same digital tool multiple times. As learners get more comfortable and confident with the tool, the instructor can build on those skills and, over time, use the same digital tool in new contexts, use the same digital tool in expanded ways, and then eventually use different tools to perform the same function. The sequence of edtech use is what can build resilience for new technologies in class. Digital resilience grows when learners develop this level of confidence and skill inside the classroom in a supportive learning environment and are encouraged to apply the skills outside of the classroom. Edtech routines are an important part of building digital resilience and can be used regardless of the topic." (p. 6)

The DigitalUS Coalition has defined digital resilience as "having the awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands. Digital resilience improves the capacity to problem-solve and upskill, navigate digital transformations, and be active participants in society and the economy."

DigitalUS Coalition, [Building a Digitally Resilient Workforce: Creating On-Ramps to Opportunity](#)

## Digital Skills Framework Selection

At the time of the project, the ACLS unit of the Massachusetts DESE offered [various digital skills frameworks](#) for programs to consider and adopt according to their preferences. The options include the [International Society for Technology in Education \(ISTE\) Standards](#), the [Maryland Digital Literacy Framework](#), and the [Northstar Digital Literacy Standards](#). Simultaneously, ACLS was also in the process of exploring and selecting new frameworks for the state.

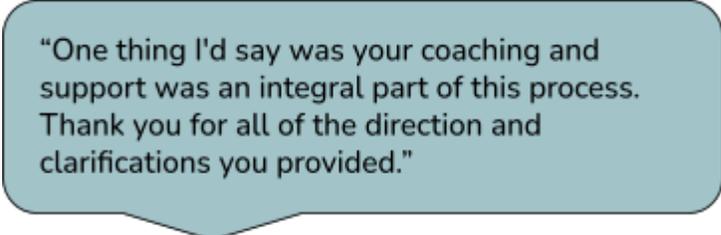
<sup>3</sup> [A Playbook for Fostering Digital Resilience through Instruction in Adult Education: Preview Draft - April 2023](#) was created as part of the Digital Resilience for the American Workforce (DRAW) professional learning initiative funded by the U.S. Department of Education: Office of Career, Technical, and Adult Education.

<sup>2</sup> DigitalUS Coalition, [Building a Digitally Resilient Workforce: Creating On-Ramps to Opportunity](#)

Knowing from our work on Phase I that not all programs had selected a framework or were using one for instruction and recognizing that the future may bring different guidance from the state, the project strategically adopted the [Seattle Digital Skills Framework](#), as it also aligns with the framework used for the [EdTech Integration Strategy Toolkit](#). By doing this, we ensured a standardized approach across all programs, as this framework served as a common set of standards, fostering consistency in the development of edtech routines. Additionally, this meant that all the edtech routines could be more easily compared, adopted, and adapted by any program. Looking into the future, if the state provides future guidance regarding digital skills standards, the routines can be easily edited and adapted to incorporate the new standards.

## Coaching

As mentioned previously, the coaching approach is an essential element of this initiative and is based on the recognition that coaching is a transformational professional development tool that allows for focused skill-building, valuable knowledge-sharing, and collaborative problem-solving.



"One thing I'd say was your coaching and support was an integral part of this process. Thank you for all of the direction and clarifications you provided."

During Phase II (February to September 2023), programs worked with their coaches, who, in the majority of cases, were the same who supported their program in Phase I, to identify areas for tech integration, expand their expertise in using edtech tools and explore rubrics to evaluate these tools for classroom use. Armed with these new resources and skills, programs embarked on the development of edtech routines. As described above, the creation of these routines aimed to address previously identified needs, such as providing meaningful opportunities for learners to engage with technology in a supportive environment and implementing effective methods and best practices for delivering digital skills.

Of the twenty-five programs invited to participate in Phase II, twenty-two completed the process. One program noted that they already had a protocol for documenting technology-related instructional practices and cited a lack of staff time as a challenge to participating in the project. Other challenges included issues with internet connectivity on-site, leading to difficulty with communication and implementation, as well as personal issues resulting in lead staff taking an unexpected leave of absence.

## Community of Practice

We introduced the project to the Adult Literacy Initiative (ALI), a consortium of adult literacy programs throughout the City of Boston, at their meeting in February 2023 to share the goals, time requirements, and timeline of the project. To support communication, we created a Google account and centralized all communication via a Google Group. We also shared resources with the group via Google Drive, mostly with the intention of ensuring that everyone receives and has

access to the necessary information. We also shared the project calendar to ensure programs kept track of deadlines and noted open office hours available to support their efforts.

Project participants came together to celebrate their work, share their edtech routines, and learn from each other at a face-to-face community event on July 14, 2023.



World Education also launched the Boston [Edtech Strategy Routine Library](#), described below in more detail. The Google Group listserv continues to be active and serves as a space for sharing information related to technology interaction, professional development related to tech skills, and digital equity in general.

### Boston Edtech Routine Library

The culmination of Phase II was marked by the launch of a dedicated [website](#), which now stands as a central hub housing all the edtech routines developed by Boston programs, providing a

centralized and accessible platform for these resources. This platform facilitates the sharing of expertise among peers, empowering instructors to save time by leveraging established practices.

Programs can choose to adopt, adapt, or advance these practices, fostering collaboration, enhancing

teaching strategies, and utilizing proven resources.

This collective approach fosters community and knowledge sharing and allows educators to enhance their teaching strategies through collaboration and the utilization of tried-and-tested resources.

Edtech Strategy Routine Library

A Project of the [DigLit Initiative](#), City of Boston

The DigLit Initiative is a multi-year capacity-building project that supports adult education providers in delivering quality digital literacy skill training and technology integration in adult education programs.

The ultimate goal of technology integration is to use tech tools effectively for teaching and learning, making it a regular part of education rather than a separate subject.

From February to September 2023, twenty-five adult education programs in Boston worked with World Education coaches to develop creative practices to effectively integrate technology into instruction. Used routinely, these program and instructional practices, or [EdTech Routines](#), provide adults with structured opportunities to enhance their digital skills and confidence to be empowered users of technology.

This Edtech Strategy Routine Library contains more than 70 EdTech Routines developed by Boston Programs to support digital resilience in their learners. These EdTech Routines are organized into 14 categories, and you can explore them all [here](#).

Learn more about the [EdTech Integration Strategy Toolkit](#) by World Education [here](#).

## Badges

As we reached the end of the DigLit Phase II project, we created an opportunity for participants to obtain three digital badges to showcase competencies and easily verify the skills, abilities, and knowledge obtained throughout the project. Using [Credly](#), World Education created rubrics that allowed for these credentials to be verifiable, allowing participants to get recognition for their work on the project.



The Achievement badge recognizes the participant's work during the first stage of the project (the "define" stage). By achieving this badge, participants will have demonstrated knowledge of learner factors and edtech decision-making tools and can identify potential edtech routines for learners based on the earners' unique instructional context.



The Leader badge could be obtained after completing the second stage of the project (the "design" stage). Earners of badge created two edtech routines reinforced by evidence-based strategies that explicitly connected to digital skills development.

The Innovator badge validates the work of participants during the third and last stage of the project (the "apply" stage).

Earners of the badge used at least one edtech routine with learners and reflected on and revised the routine(s) based on this experience.



In total, sixteen badges were earned. To improve completion rates in the future, we can explore ways to better communicate the value of earning a digital certificate. Additionally, exploring options to add or increase the currency of digital badges through collaboration with the City could incentivize more participants to engage in the process.

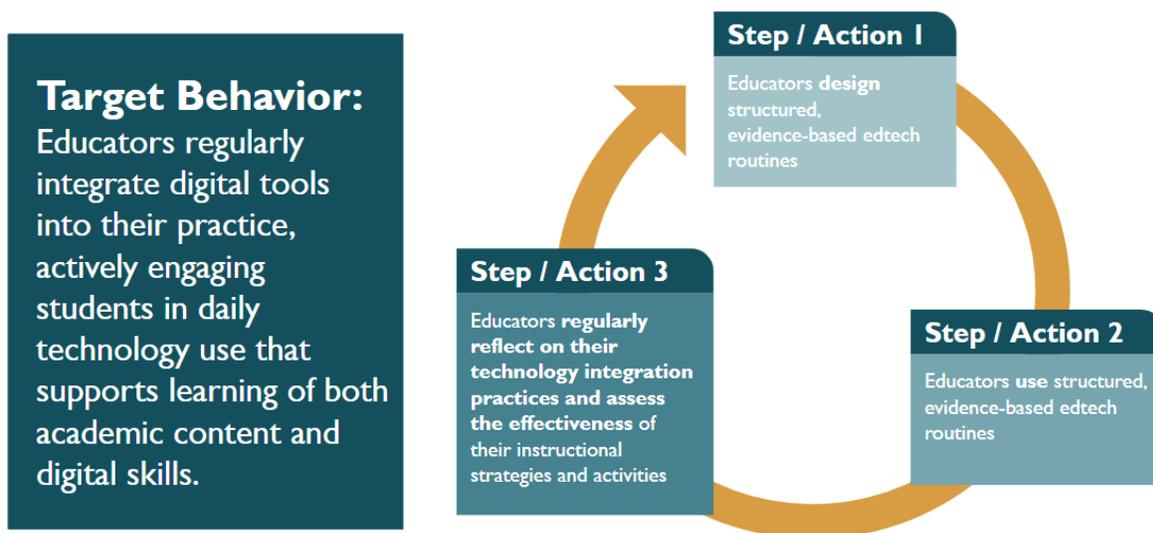
## Behavioral Change Analysis

To assess the impact of the project in supporting programs to integrate technology into the curriculum, World Education worked with colleagues in the [Behavior Initiative](#) at JSI to identify, understand, and [visualize the key factors](#) involved in the effective integration of technology into the curriculum, and determine whether instructors have acquired the necessary knowledge and skills to continue to integrate technology (one component of which is the development and use of edtech routines) into the curriculum, beyond the intervention period. The Behavior Initiative employed individual surveys, a focus group, and an abbreviated digital needs assessment form from Phase I to collect, compare information, and identify behavioral change.

One step in the behavioral change analysis process was to identify the target behavior, which, for the purpose of this project, was "**Educators consistently incorporate digital tools into their teaching practices, actively involving students in daily technology usage to enhance the learning of academic content and digital skills.**" One component of this target behavior was the development and use of edtech routines. In alignment with this target

behavior, we identified three "step behaviors" — smaller, manageable actions or tasks aimed at facilitating the attainment of the overarching target behavior. These are:

- Educators **design** structured, evidence-based activities or edtech routines;
- Educators **use** structured, evidence-based activities or edtech routines and
- Educators regularly **reflect** on their technology integration practices and assess the effectiveness of their instructional strategies and activities.



It is important to acknowledge that behavioral change is often a gradual process, and significant shifts may not be immediately apparent. As a result, the behavioral change analysis performed in August 2023 offers limited information. While the analysis provides insights and can offer guidance on ongoing strategies for improvement, it is essential to recognize that sustained behavioral change may require longer observation periods. This will allow for a more comprehensive understanding of the evolving impact of this intervention and a more accurate assessment of the effectiveness of strategies employed in technology integration within adult education programs.

Therefore, given the short time span between the introduction of edtech routines and the time of the behavioral change analysis, we can use this analysis as a baseline for evaluating progress over time, measuring the impact of interventions and identifying areas for improvement, and informing ongoing strategies for sustained improvement and innovation in technology integration within educational programs.

In general, and despite the limitations mentioned above, the behavioral change analysis shows that **educators have begun to take steps towards regularly integrating digital tools into their daily practices**. “In some practices, evaluators observed an increase of up to 44% from the baseline in 2022 to the current round of data collection in 2023<sup>4</sup>.” The analysis also

<sup>4</sup> Appendix Table I: Integration of Digital Tools on the Behavioural Change Analysis

shows **positive momentum, upward trends, and a desire to continue to promote and adopt the priority/target behavior.**

Baseline data collected using the Digital Needs Assessment in 2022 indicated that only 15% of respondents were using commercial, paid-subscription instructional software. **Over the course of the engagement with World Education, adult education programs increased their use of commercial, paid-subscription instructional software by 30%**, most commonly using EnGen, Burlington English, Newsela, Townsend e-books, IXL, Northstar, KET Fast Forward, Essential Education, and Aztec. Programs with funding from DESE have free access to many of these online instructional platforms, including EnGen, Burlington English, Newsela, Northstar, Aztec, and KET Fast Forward. The state professional development system, System for Adult Basic Education Support (SABES), also managed by World Education, offers regular PD sessions tailored to Massachusetts adult educators to support them in their use of these subscription products.

Despite many adult education programs returning to in-person and hybrid instruction, the increase in the use of commercial instructional software indicates a **continued interest in the uptake of behavior that World Education sought to promote throughout its engagement with adult education programs.** Existing use of free or open instructional software was sustained, and **alternative approaches to using digital tools for communication** – such as through video conferencing, text messaging apps, and social media – **increased from 65% to 80%.**<sup>5</sup> “While we cannot assert that the increased use of digital tools is exclusively attributed to the coaching we provided to the programs, we can assert that our support and encouragement of instructors in adopting technology has significantly bolstered their confidence.”<sup>6</sup>

However, several barriers and motivators still need to be addressed or leveraged in order to see an increased uptake of the behavior amongst more educators. While many factors were noted and are outlined in the [behavior profile](#) in the appendix, the most salient factors impacting the uptake of the behavior, according to respondents, were:

- confidence of instructors,
- students’ behaviors and access,
- applicability of available digital platforms and
- funding.

For more details, the behavioral change analysis is included in this report.

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<sup>5</sup> Appendix. Data collected in August 2023. Page 34.

<sup>6</sup> Appendix. Page 34.

# Identified Promising Practices and Program Innovations

## The transformative power of continuous support

The DigLit Initiative exemplifies the transformative power of continuous support and professional development opportunities as a catalyzer of positive change and advancement in adult education.

"I appreciated this project and would not have realized so many ideas without it."

Moving away from isolated webinars and embracing partnerships for ongoing coaching represents a best practice in professional development.

Unlike one-off webinars, which can only provide brief exposure to ideas and activities, partnerships like the one supported by DigLit offer sustained learning experiences, allowing adult education professionals to delve deeply into topics over time. The personalized nature of coaching ensures tailored guidance, with consideration of strengths, weaknesses, and specific needs. This sustained coaching effort also fosters the application of knowledge in real-world contexts, enabling participants to receive timely feedback and troubleshoot challenges, thereby contributing to practical skill development.

The approach made possible by DigLit reflects a commitment to continuous improvement that supports a culture of lifelong learning and growth.

## Innovative Strategies

### Design and Implement Edtech Routines

Conversations with various programs indicate that edtech routines served as valuable tools in tackling some of the identified gaps concerning students' access to and utilization of technology within classroom settings.

"DigLit routines are definitely motivating teachers to help address students' digital literacy needs."

All programs benefited from having instructors learn and utilize edtech tool evaluation rubrics, providing a structured framework for assessing the usability of technology in the context of education. The exploration of the [Seattle Digital Skills framework](#) and the creation of evidence-based edtech routines were also welcome opportunities to learn and explore new concepts.

In one program, edtech routines were used as a foundation for developing a more robust digital literacy curriculum; another program reflected on how the process has provided the structure and support needed to move the program forward in the area of edtech

"So many great routines came out of this project and programs were really proud of the work they did!"

integration; other programs welcomed the opportunity to standardize processes using digital tools they were already implementing.

Programs continued to echo the value of having practices like routines written down for new instructors as adult education programs experience heavy teacher turnover.

“The routines are very helpful. We are excited to look through other routines that might be relevant to the program and incorporate them throughout the year.”

In summary, programs have formulated innovative approaches to guarantee effective implementation, adaptation, sustainability, and support for instructors in integrating edtech routines into their daily teaching practices.

### Identify and Establish a Dedicated Tech Training or Tech Support Role

The need for a dedicated tech training or support role came up during the needs assessment and action planning stage of the project in Phase I and again during Phase II. Programs continue to identify the need for funding to increase paid staff time or hire additional staff to provide internal tech support and training. Programs would like to have a staff person designated to assist staff and students with technical issues that they encounter in online instruction. A tech support person could provide in-person and remote, one-on-one digital skills onboarding and ongoing tech support services to all students in order to strengthen students’ ability to fully participate in remote learning.

The need for additional staffing and staff capacity to provide ongoing, as-needed tech support to students and staff is cited frequently across the majority of action plans developed in Phase I. In fact, more than 50% of the goal statements address improving and sustaining technology integration, and to achieve these goals, access to qualified tech support to troubleshoot, maintain, and update technology is implied.

By the time Phase II ended, several programs had assigned this responsibility to a staff person, and findings from this project made it possible for some programs to hire new staff in this strategic position. In some programs, this person was responsible for digital skill development for both teachers/peers and learners. However, findings from the behavioral analysis also highlight the need for programs to establish sustainable funding streams for full-time digital coordinators and other related edtech roles, so despite the adaptations made by programs, this continues to be a challenge.

### Promising Practice: Hire Former Students to Support Tech Integration and Language Access

In response to the challenge mentioned above, in at least two programs, the additional funding made available by this project was allocated to hire former students responsible for providing tech support and promoting tech integration. X-Cel, for example, hired a graduate from the X-Cel Conservation Corps as the Digital Media Coordinator & X-Cel Conservation Corps

Wastewater Instructor. With his help, the program developed edtech routines to standardize digital literacy pre-assessments for students and to track students' weekly performance, among other routines.

Similarly, Charlestown Adult Education hired a former ESOL student as the Digital Literacy Coordinator. In this instance, the student was a graphic designer from El Salvador and not only supported the creation of a centralized digital portal and streamlined access to Northstar digital literacy but also provided edtech support to Spanish-speaking learners.

With his help, the program developed edtech routines to provide centralized access to class content and school information through a structured intranet wiki, using QR codes to provide students with quick and easy access to course materials and enhance understanding and language access by utilizing translation tools available in the internet browser.

### Use Edtech Routines for Teacher Training

A common challenge across all programs is staff turnover, which results in the rapid loss of knowledge achieved during the project when instructors or directors leave. This also means that there is a need for continuous training for new staff. Furthermore, there is a crucial need to actively broaden organizational knowledge to ensure that more instructors—and consequently, learners—can leverage the insights and outcomes of the project.

To solve these real challenges—knowledge loss, continuous training, and knowledge expansion—programs explored different strategies.

“We definitely learned from our participation, especially our routines and access to the website with the other programs’ routines; we can draw from, which we will add to our staff handbook.”

Mujeres Unidas Avanzando (MUA), for example, had several new hires this year. The more seasoned instructors who participated in the DigLit project saw the value of the edtech routines. As a result, MUA revised their digital literacy section in their handbook for new ESOL and HiSET instructors and added links to the standards from Northstar, Teaching Skills That Matter (TSTM), the Maryland Digital Skills

Framework, and a link to the [Edtech Strategy Routine Library](#), with a brief description about the purpose of the routines and MUA's involvement in the project. This way, all new and seasoned instructors will have access to the resources in a centralized location.

Similarly, Charlestown Adult Education provided access to edtech routines directly from their newly developed intranet wiki to ensure teachers have access to resources and ideas for tech integration.

### Make Tech Integration a Sustained Practice

To accomplish this, programs developed various strategies ranging from staff developing a digital literacy

“This was a good program. The routines are very helpful. We are excited to look through other routines that might be relevant to the program and incorporate them throughout the year.”

curriculum or embedding routines and additional lessons within courses to strengthen students' comprehension and use technology in the classroom and beyond, as is the case at JVS Boston, Bridges to College and Careers; to offering internal professional development and support to instructors, as is the case of Julie's Family Learning Program and Gardner Pilot Academy, among others.

### **Promising Practice: Offer Internal PD and Support to Instructors**

Julie's Family Learning Program, for example, has implemented weekly staff training where teachers practice the edtech routines, learn tech skills that are new to them and have a comfortable and safe space to practice them in a group before bringing them to class.

"Now that we have all these tech routines written out and finalized, we use them to find new tech skills to teach and the JFLP teachers are able to use them as a reference."

Gardner Pilot Academy's Adult Education Program created a new requirement in which teachers need to present at least one edtech routine per week to fellow teachers. Additionally, their tech training staff person highlights one routine in her weekly email to instructors and is available for one-on-one consultations. This person also observes instructors present these routines as part of their classroom observations and provides feedback to make it a better and more sustainable practice.

Another participating program adapted its program structure to include peer mentors as a result of DigLit and in response to emerging needs from their educators.

## **Challenges and Limitations**

### **Clarity of Purpose and Planning Time**

At the project's outset, programs faced confusion regarding the relationship between the financial funding received from OWD and the outlined Phase II tasks. Some programs viewed their engagement in edtech integration work as a prerequisite of the funding, while others perceived participation as encouraged but optional, resulting in reduced interest. This lack of clarity prompted a few programs to postpone their engagement until funding was secured.

Additionally, there was a lack of clarity regarding the connection between Phase I and Phase II. Some programs were unsure as to why they were being asked to work on tech integration routines when their action plans were highlighting a need for student assessments or clear orientation for online learning. This ambiguity led to decreased engagement and interest, with some viewing the time spent or required for the project as unproductive.

To address these issues in the future, it is essential to establish a transparent link between funding and project participation from the project's inception and have clear communication, outlining the expectations and emphasizing the connection between project phases, funder goals, technical assistance and professional development investments, and financial support.

Additionally, the proposal was approved in early February, and the project was launched publicly just a week after approval. This rapid timeline created a compressed window for effective planning and communication of expectations to project participants. Unlike Phase I, where initial contact was typically with program directors or leads, Phase II required the participation of instructors. For instance, in the Boston Public Schools Adult Education program, the director participated or partially participated in meetings, coordinating the involvement of a group of seven instructors who engaged in creating the edtech routines. This resulted in lapses and inefficient communication. Varying communication and coordination approaches across programs impacted who developed routines and provided feedback on World Education support.

The tight planning schedule also affected how clearly we outlined, explained, and programs understood the project timeline. While three phases were designed for the project (define, design, and apply stages), the onset of summer vacations in May and mid-June led to some instances where the timeline had to be extended to finish the project. This caused confusion and occasionally led to misunderstandings about project timelines and expectations.

We also observed that creating quality edtech routines is a time-consuming task. As mentioned earlier, we propose allocating extra funding for staff time to overcome this challenge, ensuring they have the resources needed to participate in the process effectively. Additionally, some individuals, especially administrators, questioned the necessity of documenting edtech routine development, citing the process as a burden and underscoring its time-consuming nature.

To address this concern, future efforts should explain the process, emphasizing its benefits for programs and addressing any worries about time investment from the beginning. To address these challenges, we also recommended extending the planning time. This can ensure clearly defined roles for administrators and teachers from the project's outset, timeline adjustments, and clarity of expectations before the project starts. Regular reminders, particularly for programs with frequent staff changes, can ensure consistent understanding and implementation.

The summer event played a crucial role in providing much-needed clarity to the programs, helping them see how their individual efforts contributed to the common good. For subsequent initiatives, we propose convening all programs earlier to discuss requirements and recommend incorporating funding resources to encourage active engagement so the invested time is not seen as a distraction from other important tasks but rather is seen as a valuable time that is recognized and compensated.

## Where Do We Go From Here?

### Continue to Invest in the Confidence and Self-Efficacy of Instructors

As described further in the behavioral change analysis, the confidence and self-efficacy of instructors continue to be a barrier; even with access to tools, information about the tools, and training on tools, if funders and professional development programs do not address confidence levels and use it as a way to adapt supportive interventions, it will be difficult for a subset of educators to adopt this behavior.

**Sustained professional development and customized technical assistance efforts like DigLit can bring important rewards and improve digital outcomes for all**, but especially for those most affected by the digital divide. We recommend continuing to **provide targeted professional development opportunities** that focus on enhancing teaching skills, technology integration, and pedagogical approaches **to increase the level of comfort, confidence, and self-efficiency of instructors.**

### Design and Implement Supportive Interventions

Positive reinforcement and acknowledgment of program and instructor efforts contribute to increased confidence and motivation. **We commend and recommend the ongoing practice of showcasing programs' edtech routines and integration efforts during ALI meetings and other events.**

Sharing success stories in internal communication channels, such as newsletters, emails, or staff meetings, and establishing a formal recognition program, perhaps using digital badges, that highlights exceptional teaching practices, innovative approaches, or successful integration of technology could be helpful. This can happen through recognizing programs and instructors through public announcements to celebrate their achievements or establishing a digital badge program that recognizes programs for their participation and continuous engagement as key OWD partners in improving the way Bostonians live. **Organizing yearly edtech gatherings where programs can exchange innovative practices and build connections can foster motivation, provide positive reinforcement, and boost confidence.**

Strategically **mapping the expertise within the network to facilitate peer mentoring, peer-to-peer coaching, or extended professional development opportunities** offers an additional avenue for expanding and advancing the field and increasing confidence. **The implementation of a mentorship or peer coaching program that pairs confident edtech educators with those less confident in integrating technology could provide ongoing support, guidance, and a platform for sharing successful practices,** ultimately fostering a supportive environment for educators to strengthen their confidence and effectively adopt new behaviors.

## Inform Funding

As described in the behavioral change analysis, “Respondents expressed that requirements (such as a threshold or maximum allotment of funding for technological devices or software, etc.) tied to other, commonly relied-upon funding sources [...] restrict the use of funds for staff time and training and have a significant and negative impact on digital literacy programming within their programs<sup>7</sup>.” Many shared that **the absence of such requirements and limitations on the funding that complemented the World Education initiative was a key motivator in developing or expanding staff time dedicated to digital literacy programming.**

The City of Boston, via the ALI network and other networks, can **engage in collaborative discussions with funding sources to explore more flexible and adaptive guidelines.**

Adult education programs have limited resources to offer training and development opportunities to their staff. At the same time, adult educators often have busy schedules and hold part-time jobs; therefore, finding time or incentives for professional development can be difficult. Emphasizing the importance of **allocating funds not only for technology but also for staff development and training** can be part of these conversations. **Building awareness about the multifaceted needs of digital literacy programming and advocating for guidelines that better accommodate comprehensive program development** can contribute to a more supportive funding environment. **Securing extra funding is crucial for teachers to dedicate time to training and enhance tech integration.**

## Invest in Technology Support for ESOL Audiences

This recommendation arises from the focus group interviews performed as part of the behavioral change analysis. Although it is important to note that ESOL programs were overrepresented in the interviews, we recognize that there is a gap in digital skill development materials and resources available for multilingual learners. **As a result, funders and technical assistance partners could consider joint initiatives with technology developers and implementing organizations to generate technology support resources that are tailored to English Language Learner audiences.**

For example, partnering with the Mayor’s Office for Immigrant Advancement (MOIA) to inform and support [their funding initiatives](#) aimed at identifying new and creative ways to lower barriers and create more equitable access to ESOL courses throughout the city can be a good approach.

Another approach is to **establish multilingual digital navigator services that support speakers of other languages in their preferred language.** [Peer Digital Navigators](#) are being trained by some organizations to help coworkers, classmates, and community members with their digital inclusion needs. As a result, adult educators do not have to offer this additional

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<sup>7</sup> Appendix. Behavioral Change Analysis Report. Page 40

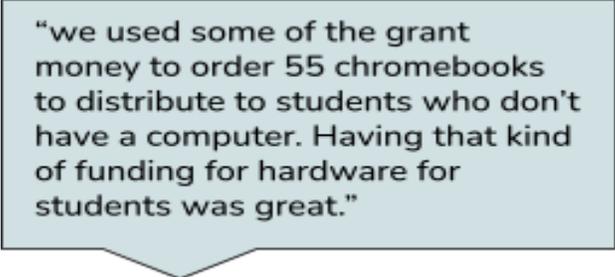
service, which often requires additional funding or staffing, as learners gain access to connectivity, devices, and basic digital skills through trusted community members.

Another example of **braided funding and coordination** is the effort initiated by the City of Philadelphia in early 2021, where they offered to contribute funding if a digital skills developer was able to bring other cities and funding partners to contribute enough funds collectively to support the adaptation of their digital skills assessment and training to at least one additional language. This collective effort resulted in the adaptation of Northstar to Spanish.

## Prioritize Digital Equity

### Champion equal access to digital tools, resources, and opportunities for all adult learners.

The digital divide, often exacerbated by disparities in income and other structural barriers, limits access to essential online connectivity, tech devices, and educational opportunities for learners and instructors alike. Closing this gap by promoting initiatives that ensure everyone has the necessary access to quality internet, devices, and skills to thrive in the digital age needs to be prioritized.



“we used some of the grant money to order 55 chromebooks to distribute to students who don't have a computer. Having that kind of funding for hardware for students was great.”

**Raising awareness about the importance of digital equity is crucial. By highlighting the impact of unequal access on education, employment, and overall quality of life, advocates can garner support for initiatives that promote a more inclusive and digitally empowered society.**

As described in the behavioral change analysis below, learners' access to connectivity, devices, and previous knowledge of digital skills significantly influences educators' ability to adopt digital integration behaviors. Respondents expressed significant challenges with managing the integration of digital tools because of barriers like unstable internet connections at home (especially important for virtual programs).

In certain educational settings, particularly in ESOL programs, where a majority of students are non-native English speakers, cohorts are based on language capabilities. However, within these language-based cohorts, the disparity in digital tool familiarity is substantial. To optimize the use of digital tools, teachers find it most effective to further divide learners into cohorts based on their digital proficiency.<sup>8</sup> This segmentation proves crucial as troubleshooting technical issues can otherwise become a significant distraction from the lesson itself. “According to participating

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<sup>8</sup> Appendix. Behavioral Change Analysis Report. Page 37

administrators and teachers, students often lack support for using related technology off-site (i.e., at home) or require more support than programs can provide with current funding.”<sup>9</sup>

**Recognizing the critical need for additional funding to support roles like dedicated tech assistance or digital navigation within programs to more effectively support learners becomes a priority.**

Administrators and teachers participating in the focus group discussions highlighted that **efforts to expand access to internet connectivity for students are essential.** While many reflected on current efforts, including the provision of hot spots and the affordable connectivity program, many noted how these efforts are insufficient.

The City of Boston can follow the examples of initiatives like [Chicago Connected](#), a groundbreaking program that provides free high-speed internet service to approximately 100,000 Chicago Public Schools students; [PHLDonateTech](#), a City initiative calling on residents and businesses to donate, recycle, and provide computers to families and people in need; or [San Diego’s digital navigator program](#) offering community members phone-based support for issues relating to discounted internet, tech support, and device access. At the state level, the [Texas Distance Education Professional Development Center & Call Center](#) provides technical assistance to Texas adult education students and educators, answering questions about distance learning curriculum, learning management systems (Google Classroom, etc), Zoom, and more.

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<sup>9</sup> Appendix. Behavioral Change Analysis Report. Page 38

# Appendix

## Behavioral Change Analysis Report

Prepared By:

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Riley Auer, Social and Behavior Change Project Officer

### Evaluation Purpose

This analysis has three goals:

1. identify, understand, and visualize the key variables involved in the effective integration of technology into curriculum, broadly defined as the totality of student experiences that occur in the educational process from the perspectives of educators and administrators;
2. determine whether instructors have acquired the necessary knowledge and skills to continue to integrate technology into curriculum (one component of which is the development and use of edtech routines<sup>10</sup>) beyond the intervention period.
3. propose strategies that foster and support the effective integration of technology as a standard teaching practice.

### Key Objectives (KO)

**Key Objective #1:** Understand progress toward behavior change

**Key Objective #2:** Unravel promising best practices by determining:

- what has worked generally (Key Objective #2.1)
- where to strengthen elements in future programs (Key Objective #2.2)
- how to incorporate new practice into existing programs (Key Objective #2.3)

**Key Objective #3:** Outline gaps that could be filled in the future by complementary programs or wider stakeholder base

### Evaluation Questions

To address these goals, the following questions were developed:

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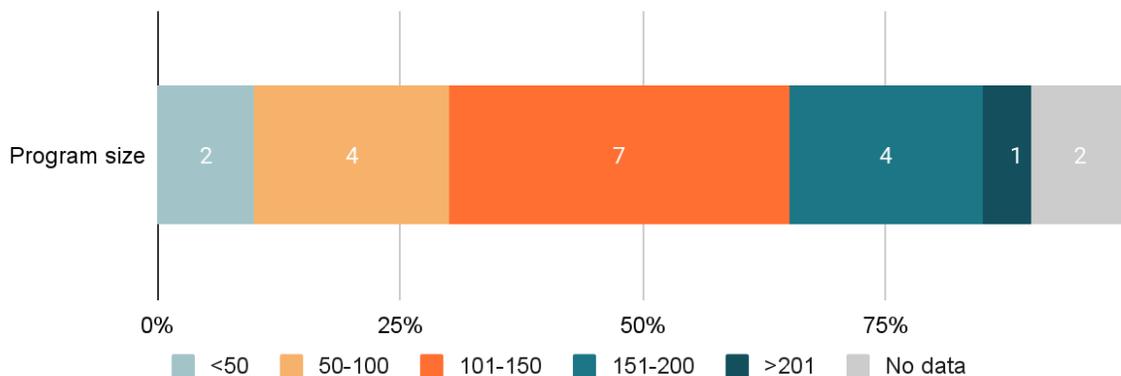
<sup>10</sup> **Edtech routines** are just one of several components in meaningful edtech integration in programs. Other components include teacher/staff training, hardware/software availability, and usage, etc.

1. To what degree have edtech integration behaviors been adopted and why? (KO1)
  - a. To what extent have instructors modified their teaching methods and integrated technology into their curriculum using edtech routines<sup>5</sup>? (KO1)
  - b. What strategies can be used from the perspective of instructors and learners to foster and support effective integration of technology as a standard teaching practice? (KO2)
2. What gaps could be filled in the future by complementary programs or a wider stakeholder base to ensure tech integration? (KO3)

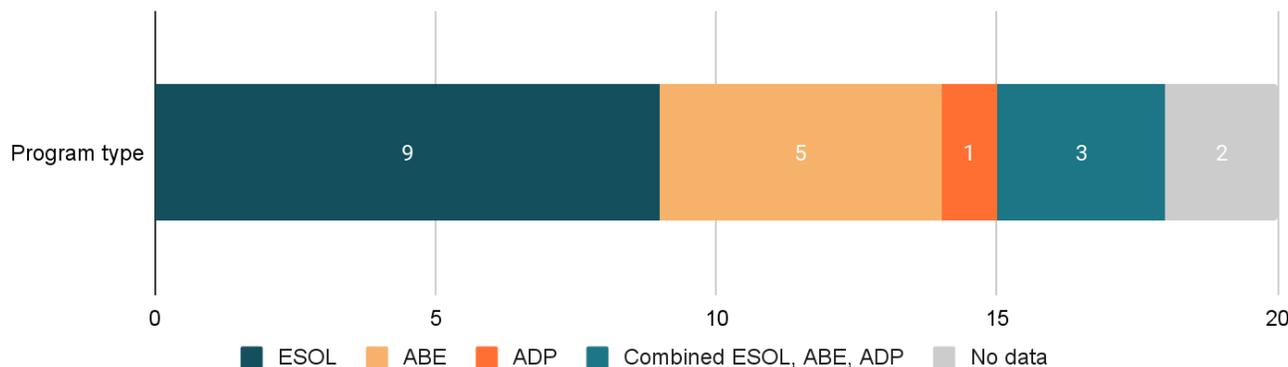
## Sampling Strategy, Recruitment, and Data Collection

The team used a purposive sampling strategy to collect data for this evaluation. Of the 25 education programs that are engaged in this work, twenty percent (20%; n=5) were included in this study. As the education programs represent groups of instructors, the evaluation team opted to include 3-4 representatives from each. The purposive sample included:

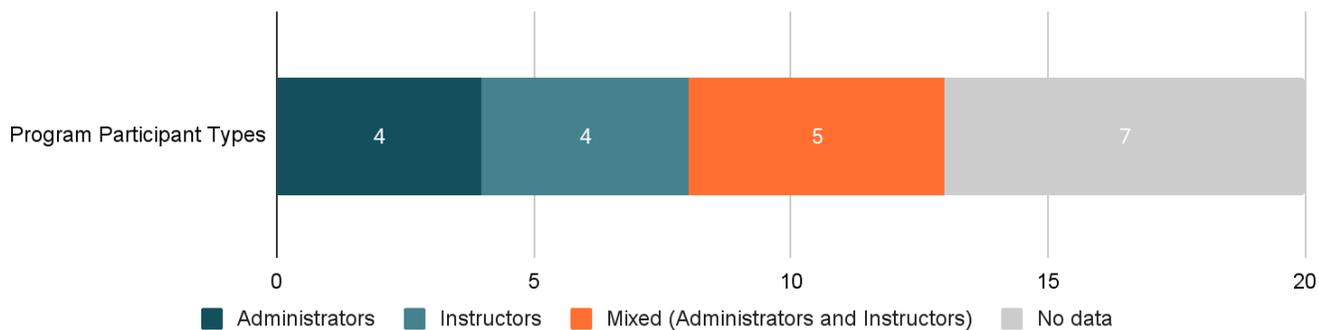
- Representation of program size



- Representation of different program types (ESOL, ADP, ABE, HSE)



- Representation of different funder types (State and City level)
- Representation of sociodemographic factors
- Representation from instructors and administrators



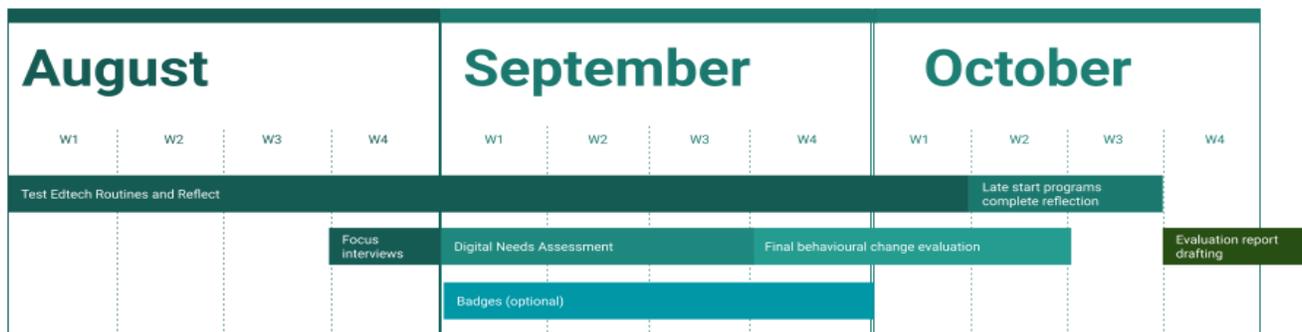
To reduce bias in the selection of this purposive sample, evaluation team members worked with the World Education/ Boston Edtech implementation team to gather a list of all 20 programs, aligning all characteristics above. For the comprehensive list, the evaluation team will select participating centers at random. The timing of the evaluation coincided with a period of time when many education centers were closed, and instructors and administrators were unavailable. As a result, the team continued to recruit participants to deal with this unavailability, keeping the original sampling characteristics in mind as much as possible.

## Limitations

### Timing of Evaluation

Many adult education programs break for the summer, returning to activities in mid to late September. The timing of WE implementation (**Figure 2**), which overlapped this period, likely resulted in limitations to further integration and, thus, the findings of the evaluation.

**Figure 2: Timing of WE implementation**



**Summary of the timeline:** in April 2023, programs initiated the development of edtech routines with the support of WE. On July 14, 2023, a showcase event was held in Boston, where a website containing the routines was unveiled. In August 2023, programs started testing and modifying the routines, although some were on a break at the time. In late August, an abbreviated digital needs assessment survey was sent to programs, which was used in the subsequent evaluation, and the focus group interviews were also conducted during this period.

## Sampling Approach

While the sample of adult education centers remained purposive, the representatives selected to participate in the educator focus group discussions from those education centers were self-appointed. During the FGD, it was clear that those who represented educators from the adult education centers were generally comfortable using and talking about integrating digital tools into their daily instructional routines. While they could speak at length about the experiences of their colleagues, their perspectives were reported rather than documented directly by those who have more difficulties integrating digital tools.

## Turnover

Turnover and teacher shortages in adult education have become pronounced due to educators adapting to new teaching methods, including online and hybrid models, along with broader trends that have prompted some educators to leave or reconsider their careers. As a result, the instructors or directors completing the digital needs assessment in Phase I of the project may not have been the same instructors or directors completing the assessment in Phase II of the project. This turnover presents a challenge for data analysis, as the change in personnel conducting the assessments can affect data consistency and comparability.

## Findings and Impact

### Uptake of Digital Tool Integration Behavior

This evaluation sought to understand the degree to which edtech integration behaviors have been adopted by educators and why. A behavior is a specific action that a person or a group of people practice in order to improve important outcomes like enhanced reading comprehension, retention of learners, or improved digital literacy. In order for behaviors to change and sustain, practitioners apply behavioral science (defined as the study of human behavior) and social science (defined as the study of relationships among individuals in a society through the lens of anthropology, economics, communication, politics, etc.).

Using this understanding of behaviors and how they change, evaluators set out to determine whether educators engaged in World Education programming were able to increase their adoption of the following priority behavior: **“Educators regularly integrate digital tools into their practice, actively engaging students in daily technology use that supports learning of both academic content and digital skills.”**

To achieve this desired behavior, three key actions or steps were identified:

- Educators ***design or curate and adapt structured, evidence-based activities*** or edtech routines
- Educators ***use structured, evidence-based activities*** or edtech routines
- Educators ***regularly reflect on their technology integration practices, assess the effectiveness of their instructional strategies and activities, and incorporate regular use*** of edtech routines based on their findings.

Using insights from instructors and administrators who were engaged in World Education’s Boston

**Overall, the results indicate an upward trend in educators’ efforts to regularly integrate digital tools into the practice within the year of working with World Education. In some practices, evaluators observed an increase of up to 44% from the baseline in 2022 to the current round of data collection in 2023.**

Digital Literacy efforts, it is evident that educators have begun to take steps towards regularly integrating digital tools into their daily practices. To get a better sense of the actions that instructors and administrators are taking to demonstrate their efforts to a) *regularly integrate digital tools into their practice* and b) *actively engage students in daily technology use that supports the learning of both academic content and digital skills*, the study team asked education centers a series of questions via survey.

Their responses demonstrate a variety of ways that this behavior could be practiced. Those data were expanded and

triangulated during focus group discussions (FGDs) with educators and administrators. Ways that the behavior might be adopted could include the use of commercial, paid-subscription, or free and open instructional software, the use of video conferencing and other telecommunication platforms, and the use of shared online working spaces, as indicated in **Table I**.

Baseline data was collected in 2022 and indicated that only 15% of respondents were using commercial, paid-subscription instructional software. Over the course of the engagement with World Education, adult education facilities increased their use of commercial, paid-subscription instructional software by 30%, most commonly using EnGen, Burlington English, Newsela, Townsend e-books, IXL, Northstar, KET, Essential Education, and Aztec. This increase in the use of commercial, paid-subscription instructional software continued to increase despite many adult education centers returning to in-person and hybrid instruction beyond the peak of the COVID-19 pandemic. This increase indicates a continued interest in the uptake of behavior that World Education sought to promote throughout its engagement with adult education programs. Though respondents did not report increased use of free or open instructional software, existing use of free or open instructional software was sustained, and alternative approaches to using

Table I: Integration of Digital Tools		
% of adult education programs using select types of digital tools in their instructional practice	2022	2023
We use a commercial, paid-subscription instructional software, platform, and learning management system for remote and hybrid instruction. (e.g., EnGen, Aztec, Essential Ed).	15%	45%
We use free or open instructional software or learning management system (e.g., Google Classroom, Canvas for Teachers).	52.6%	52.6%
We use video conferencing, text messaging apps, and/or social media to communicate with students (e.g. Facebook group, WhatsApp, Zoom, Skype, Google meet, and Remind).	65%	80%
Staff use a variety of online technology tools to communicate and collaborate. Some examples include e-mail, wikis, shared online documents, blogs, and social networking sites	57.8%	80%
Staff use productivity software to perform various tasks, including creating written documents, graphs and spreadsheets, and presentations, such as Microsoft Office (Word, Excel, PowerPoint) and Google Applications (Docs, Sheets, Slides).	50%	80%
Staff use instructional software ranging from complete online curricula to those used for specific skill development, e.g., reading, writing, math, work skills, and ESOL (e.g. Burlington English, Essential Ed)	25%	30%
Staff evaluate and use new technology to choose what is best to use in the classroom and program.	26%	60%

digital tools for communication – such as through video conferencing, text messaging apps, and social media – increased from 65% to 80%. Findings also show an increase in other telecommunication efforts for collaboration, including email and shared online documentation sites.

**Results also show evidence of a 30% increase in staff using digital tools within the year of World Education’s engagement with the adult education programs.**

While we cannot assert that the increased use of digital tools is exclusively attributed to the coaching we provided to the programs, we can assert that our support and encouragement of instructors in adopting technology has significantly bolstered their confidence. This, in turn, has solidified the belief that technology is not merely a desirable skill but an indispensable one and that it is essential to be developed in the adult education classroom.

Focus group discussion respondents validate their interest in continuing to integrate digital tools into their practice by suggesting the following:

Administrators	<ul style="list-style-type: none"> <li>● Expand access and use of professional development for teachers around digital literacy and integration;</li> <li>● Launch a focused, digital literacy class for students to strengthen and practice skills with support from teachers and peers;</li> <li>● Launch semi-structured or supported peer mentorship initiative to strengthen digital literacy skills and digital integration between teachers;</li> </ul>
Teaching staff	<ul style="list-style-type: none"> <li>● Engage in intentional and regular practice of digital integration skills situated in real life contexts (such as sending emails, using audience engagement platforms);</li> <li>● Assess student comfort and skills (self efficacy) around digital literacy behaviors at appropriate frequencies for program adaptation and tailored support to students;</li> </ul>
Funders	<ul style="list-style-type: none"> <li>● Establish sustainable funding streams for full-time digital coordinators and other staffing roles; and</li> <li>● Explore student barriers and motivators as it relates to adoption of recommended digital literacy and digital integration behaviors.</li> </ul>

## How to Propel Change: Focusing on Factors Influencing Adoption of Behavior

To understand better why the educators' behavior (i.e., regular integration of digital tools) is changing and what might propel greater change, it is important to understand factors that impact behaviors, noting that factors or drivers of behavior change can be internal (skills, confidence, knowledge), social (peer influence, education norms) or structural (infrastructure, hardware, policies, etc).

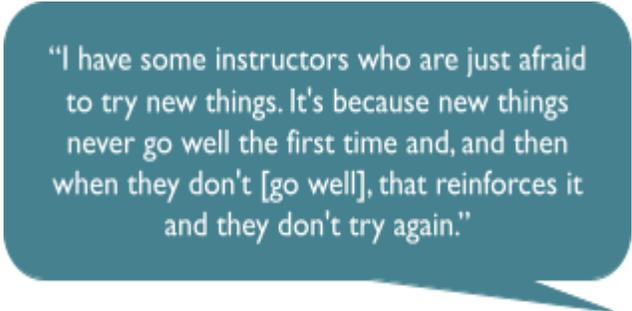
There is positive momentum, upward trends, and a desire to continue to promote and adopt the priority behavior<sup>11</sup>. However, several barriers and motivators still need to be addressed or leveraged in order to see an increased uptake of the behavior amongst more educators. While many factors were noted and are outlined in the [behavior profile](#) in the appendix, the most salient factors impacting the uptake of the behavior, according to respondents, were **confidence of instructors, students' behaviors and access, applicability of available digital platforms, and funding.**

### Confidence and Self-Efficacy of Instructors

A leading factor that impacts educators' ability to adapt the behavior is their own confidence or self-efficacy, which ranges significantly by individual.

Respondents describe a continuum of confidence in their educator programs, as indicated in **Figure 1** below. The continuum of confidence ranges from educators who are unwilling to try new things because of their deep fear of failure and unsuccessful past experiences. Those experiences could be related to trying to practice this particular behavior or other behaviors in the workplace.

Those in the middle of the continuum may not take the initiative to learn about and adopt the behavior but are willing to try with ongoing support and nudges from colleagues. They may not learn the new approaches quickly, but they are willing to invest and have enough confidence in themselves to continue trying. At the end of the confidence continuum lies educators who are excited to try new digital tools even if they have not had experience with it. They take initiative, typically learn quickly, or have the confidence to find alternative ways to become familiar with and successful in using digital tools.



"I have some instructors who are just afraid to try new things. It's because new things never go well the first time and, and then when they don't [go well], that reinforces it and they don't try again."

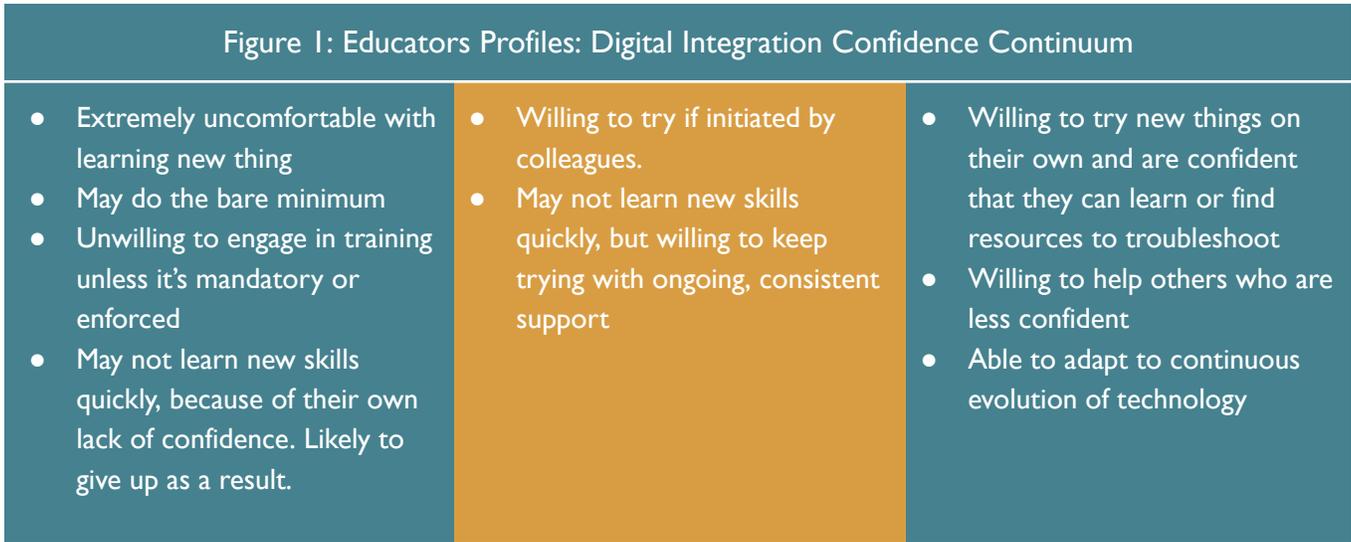
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<sup>11</sup> Priority Behaviour: Educators regularly integrate digital tools into their practice, actively engaging students in daily technology use that supports learning of both academic content and digital skills.

The level of confidence or self-efficacy, according to respondents, is one of the most important factors to address if we want to promote the adoption of the behavior.

Even with access to tools, information about the tools, and training on tools, if funders and professional development programs do not address confidence levels and use it as a way to adapt supportive interventions, it will be difficult for a subset of educators to adopt this behavior.

Regardless of where they fall on this continuum, respondents emphasized the importance of offering support to educators who are trying to adopt these behaviors. There is an increased level of support to staff to troubleshoot any technical issues that are encountered during online instruction.



However, adult education programs saw no increase in efforts to proactively support staff to build skills, self-confidence, or self-efficacy, as indicated in **Table 2**. This demonstrates a need to support programs in these areas. Adult education programs may have limited resources to offer training and development opportunities to their staff; at the same time, adult educators often have busy schedules, and finding time for professional development can be difficult.

**The impact of students’ behaviors and experiences on educator behaviors**

The focus of World Education’s engagement with the City of Boston’s adult education programs was to support *educators* to regularly integrate digital tools into their instruction with the ultimate goal of providing learners (students) with frequent and consistent opportunities to develop digital skills, gain

agility, and increase confidence to be empowered users of technology.

Though educator behaviors were in focus, the evaluation suggests that *student* behavior and *their* current relationship with technology cannot be ignored as it significantly influences educators' ability to adopt digital integration behaviors. Respondents expressed significant challenges with managing the integration of digital tools because of barriers that students introduce related to technology use, including: unfamiliarity with a computer, computer mouse, and keyboard, generally limited understanding of how technology works, and unstable internet connections at home. (especially important for virtual programs).

“We have several classes at our center that are focused on students who don't know how to read and write in English and ESOL students who have very low reading and writing in their native language. And the technology becomes especially difficult for them, because they can't read and write to navigate [the technology]. So much of what they do is visually based. And if the [platform] starts moving and they can't memorize, it requires them to read. That becomes much more difficult and in terms of teaching routines. But in terms of trying the different skills, this group is often the hungriest to learn how to use the technology. And so figuring out how to teach them the basic tools and what they need, and balancing that becomes even more difficult than, with the individuals who can at least read and write fairly well.”

**Table 2: Staff support**

Staff support	2022	2023
We have a staff person designated to assist staff and students with technical issues that they encounter in online instruction.	15%	35%
We have a process in place for assessing the digital literacy skills and needs of staff. (If a standards framework is used, describe.)	15.8%	10%
We provide professional development (PD) in-house to build staff digital literacy and tech capacity.	31.5%	30%
We require staff to attend PD to address gaps identified in performance review, self-assessments, etc., and pay for their time to attend.	60%	60%

Even for educators who are not expert adopters of digital integration, according to respondents, it is difficult to empathize with students who are unfamiliar. Educators emphasize the need to “*switch into the mindset of some of these students that have recently arrived [in the United States]. It's hard for students to open their inbox or to close their browser.*” As educators strive to integrate digital tools into their instructional practices, it remains difficult to do that when students do not have even basic familiarity

with technology.

At some education facilities, most students are non-native English speakers. As such, they are divided into learning cohorts by language capabilities. Within those language cohorts, familiarity with digital tools varies so significantly that the most effective way for teachers to use digital tools is to separate the learners into additional cohorts by their digital familiarity, as troubleshooting technical issues is a significant distraction from the lesson itself.

Administrators and teachers participating in the focus group discussions highlighted that efforts to expand access to internet connectivity for students are essential. While sentiments reflected current efforts, including the provision of hot spots and affordable connectivity programs, are an important step, many noted how these efforts are insufficient:

But honestly, we need a whole person to even help students apply for affordable connectivity programs. **Because we'll hand out hotspots, but that's not a permanent solution.** And yeah, we're just we're just not equipped with the staff [that we have funding for] to even begin to address [this]. We're like handling this piece of the puzzle when it's like a whole big picture. And it's so hard.

Ofentimes, when you help students who don't have hotspots or don't have internet [access], you can give them the service. **But the one of the reasons they don't have it is because they don't know how to hook it up, or how to use it.** And so that is that, you know, sometimes that is the easiest part, because then you have to have them hook it up or set up the WiFi at home or connect to it. There's just so many things that you just don't anticipate.

According to participating administrators and teachers, students often lack support for using related technology off-site (i.e., at home) or require more support than programs can provide with current funding. Student knowledge and comfort using technology to expand their access to the internet is mixed, and for students with low comfort, it is possible that related persistent challenges will continue to negatively impact adoption of digital literacy, especially when mistakes lead to financial consequences:

Yeah, I, I just want a second the hotspots rather, rather than the affordable connectivity program, which is supposed to provide free or discounted internet to people. **But we have found it so hard to use and to just to apply for and to get set up and then have found students being charged when they aren't supposed to.** So we've stopped, we've stopped signing students up for it just because it's, it's been way more trouble than it's worth. And we've had students who like couldn't, got charged when they weren't supposed to then couldn't pay for it, then the internet got, you know, canceled and then they didn't have internet anyway. And then they owed all this money. And so it was just like so, that I have found that program very difficult for us to navigate successfully.

The lack of focus on students and their behavior, especially as it relates to supporting educators to integrate digital tools, was noted as a significant gap and area for focus in future programming.

## Applicability of Existing Digital Tools and Platforms

To continue to improve the uptake of this behavior, respondents suggested a range of support options, many of which centered around the utility and wide applicability of specific digital tools being used. Specific to platforms used to engage students directly, respondents suggest that much of the software is intended to be used on a computer screen. However, students use a range of devices, including apps on

cell phones and tablets. Suggesting or prioritizing the use of more versatile platforms would improve students' learning experiences, as many use mobile devices.

During reflections on the range of software used by educators within their programs, some respondents suggested the development of a central clearinghouse to review and consolidate different educational software that can be used in intermediate to advanced adult ESOL classes. The strong recommendation for a focus on ESOL students was also observed in reflections on topic-specific platforms, such as those for college

"We are starting to use VOXY and using Aztec; however, we have not found a commercial curriculum that would serve our student demographics well. In our experience, **lower level student needs are better addressed in classes with the focus on oral communication in authentic situations rather than computer curricula**; so far, we have not found subscription ESOL curricula sufficiently [developed]."

and career readiness skills ("VOXY may have a better variety of materials for upper levels, but we are just starting to use it; we see it as a great resource in a lower intensity DL class").

## Sustained funding for staff time and training

Administrators highlighted sustained funding for staff time and training as, in their view, a critical action to sustain the uptake of the behavior. Respondents expressed that requirements (such as a threshold or maximum allotment of funding for technological devices or software,

"But again, I was able to pay teachers because of this project. I just want to say that **if there is no additional funding for us for developing digital literacy, then the whole push becomes an exercise in hypocrisy**, when we are told to do things and it's another unfunded responsibility that we have. That's it. But we can, we can, we can certainly, I think, I will raise awareness, this helped us."

etc.) tied to other, commonly relied-upon funding sources. These requirements restrict the use of funds for staff time and training and have a significant and negative impact on digital literacy programming within their programs. Many shared that the lack of such requirements and restrictions on the funding that complemented the World Education initiative was a key motivator in developing or expanding staff time dedicated to digital literacy programming.

"I just want to say that **I feel that it is absolutely a must for every program to have a digital coordinator** who would be not only [help develop] curriculum, maintain the technology—like okay, we have computers now, in every classroom. As I said, our goal is to make it a habit to use in the class. Who is going to maintain all that? And what about the new software that is coming out all the time? What about new equipment, new hardware?"

Building on their unanimous appreciation for the funding they have received as part of this initiative, participants shared several suggestions around the use of funding for staff time and training, including

- Using funding to support a dedicated, permanent digital coordinator role and
- Using funding to support digital literacy training for all instructors.

## Utility of edtech routines

The study team also sought to understand the specific role that the edtech routines have played in changing educator behaviors related to regularly integrating digital tools into their practice. At the time of the study, World Education was in the early stages of launching and implementing edtech routines with adult education programs. Although there had not been much implementation time, respondents were able to share their early experience with the edtech routines.

**Edtech routines** are instructional or program practices in which teachers use the same digital tools regularly and repeatedly for the same purpose in a lesson to support consistency and digital skill-building that aligns with the content of the class; or that programs use, also regularly, to enhance the learner experience. For developing digital resilience, the same routine can be eventually substituted with a different tool serving the same purpose to challenge learners to tackle a new technology.

**Positively, respondents suggest that the edtech routines are useful for addressing some of the gaps that were identified with students related to their access to and use of the technology currently being used in classrooms. In one program, edtech routines were used as a foundation for developing a more robust digital literacy curriculum.**

While initial feedback on the World Ed approach was generally positive, administrators and teachers

**“The EdTech routines actually helped someone on our team develop a written lesson plan for a whole bunch of things that did not exist ahead of time. We were able to create a digital literacy curriculum that is going to be implemented in January with the next cohort. In the meantime, some of the lessons and some of the things that we developed as a result of the routines were embedded into our practices this semester, the July to December, with the full intent that we’re going to implement a full scale, digital literacy curriculum and an additional class for our students to help them get on on par with where they need to be, especially when they go off to college for their certificate or degree programs. So it was great to have [NAME] in particular work with me to develop those routines.”**

shared several critiques that could be used to streamline and improve future efforts.

Many noted that the initial structure or process for generating and documenting the edtech routines was not clear. As a result, there was no consistent approach between programs around who developed edtech routines, shared feedback on World Education support, or otherwise engaged in the initiative. Respondents recommended clarifying specific roles for administrators and teachers at the start of the process with regular reminders, particularly for programs with high rates of staff turnover.

The development of edtech routines was time-consuming. Similar to recommendations referenced previously in this report, funding for staff time could partially alleviate this challenge. The value or benefit of documenting the development and use of the edtech routines for programs was not clear. Particularly among

administrators, respondents felt the required documentation did not serve program needs and the level of effort to complete documentation was a significant burden – in one respondent’s view, a “time sink.” Future documentation efforts could respond to this feedback with efforts to clarify the documentation process at the beginning of the engagement and outline how documentation will be used, with particular emphasis on benefits for programs.

## Other Factors

A number of other factors were raised by participants over the course of this study. While the aforementioned factors were highlighted as priorities for supporting the adoption and sustained behavior, actions to address the following factors could lend additional support to both the primary actor (teachers) as well as a range of supporting actors:

- Dedicated financial support to expand teacher training (professional development) on currently available technologies and additional student seats;

- Donors and assistance providers, such as World Education, could look at tools/curriculum currently used by programs and make sure any platforms used fit/are relevant for students;
- Fund or otherwise incentivize collaboration between assistance partners and technology providers to expand options for asynchronous support (such as FAQs, how-to libraries, etc.) aimed at ESOL learners; and
- Expand access to technology needed for digital literacy and integration beyond the classroom.

## Analysis and Strategies for Success

To successfully and sustainably change behaviors, it is important to remember that an entire ecosystem must be in place to provide an environment that enables change.

While World Education is a part of the ecosystem, according to these findings and recommendations from respondents, other actors have a role to play. As such, this section will focus on recommendations that are within WE's sphere of influence as well as those that are not as **a call to action to all key stakeholders who have the mission of championing digital literacy and resilience in adult education programs.**

1. **Knowing your Audience is Critical.** A “one size fits all” approach does not work. Program designers should explore and understand the differences between segments in the audience in order to meaningfully adapt programming. Additional research is needed with each segment—from “uncomfortable with learning technology” to “able to adapt to the continuous evolution of technology”—as most of our respondents were confident and easily practiced the behavior and were speaking on behalf of their peers who were less confident.
2. **Identify “champions” and “mentors.”** As exemplified within one participating program, a champion approach can positively influence peers while providing support to adapt a program to the needs and capacities of students and staff. During the implementation of World Education's DigLit initiative, the program identified a champion for digital literacy – specifically, they were able to hire a digital coordinator as a result of expanded and unrestricted funding that complemented this initiative. This champion was then able to advocate for digital integration within the program and support primary actors (teachers) to adopt and sustain the behavior. Another participating program adapted its program structure to include peer mentors as a result of World Education's initiative and in response to emerging needs from their educators.

Assistance partners can consider modeling this approach by designing or adapting programs for educators based on their level of confidence and willingness to try incorporating digital tools into their daily practice. This could include establishing a mentoring relationship between low-confidence or low-skill educators and advanced technology users, as well as semi-regular skills assessments of educators to inform adaptation.

3. **Consider the chicken AND the egg.** This evaluation elucidated the linkage between digital literacy and integration behaviors of students and educators. While support for educators is needed and meaningful progress to support these actors was achieved through the World Education initiative, future efforts should address students *while* focusing on educators due to the range of overlap between barriers for each of these audiences. There is also a significant overlap in reported enablers for educators and students. For example, respondents in this study described situational or context-specific learning as the most useful for promoting the uptake of digital literacy and integration for both educators and students. Programming that leverages this and other synergies in audience priorities is likely to result in positive changes in both groups of actors.
4. **Fill resource gaps for funding teachers and students.** While current funding for accessible technologies is necessary, resource gaps exist that stall progress, particularly among ESOL learners. To maintain this initiative's momentum, funders should prioritize filling priority resource gaps for educators, such as staff time, and for students, such as access barriers to technologies (i.e., hotspots and remote support).
5. **Invest in ESOL-specific digital literacy tools and strategies.** So much of the technology used by programs participating in this initiative did not focus on students who are non-native English speakers. Respondents reported that, though student engagement was outside of the scope of this initiative, this served as a significant barrier to both trying and sustaining digital literacy behaviors among students. Future investments could further explore student experiences directly and collect and curate testimonials and reviews of technology software and hardware across programs using similar technologies for ESOL learners. These cataloged experiences could serve as use cases for program implementers and educators, as well as resources for adult students experiencing challenges with digital literacy or integration. Additionally, as recommended by one respondent, funders and assistance partners could consider joint initiatives with technology developers and implementing programs to generate technology

support resources specifically for ESOL audiences (e.g., FAQ and resource libraries). These resources could build on the knowledge documented by the DigLit initiative to generate audience-specific support strategies and tools.

To build on or complement this effort, program designers could consider collecting and curating testimonials and reviews from other programs utilizing similar technologies for ABE, ADP, and ESOL programs.

## Appendix

### Behavior Profiles: An Overview<sup>12</sup>

A Behavior Profile is an analysis of a specific behavior. It delineates logical pathways from the behavior to the factors and supporting actors influencing the behavior to program strategies. A Behavior Profile is created for the specific context (e.g., region, country, locale) using desktop research, formative research, and what is presently known about the behavior.

A Behavior Profile puts all essential information about a priority behavior in a simple to read table.

STEPS	FACTORS	SUPPORTING ACTORS	STRATEGIES
<p><i>What steps are needed to practice this behavior?</i></p> <p><b>Behavior</b></p> <ul style="list-style-type: none"> <li><span style="background-color: #008080; border-radius: 50%; padding: 2px 6px; display: inline-block; margin-right: 5px;">1</span> Step</li> <li><span style="background-color: #008080; border-radius: 50%; padding: 2px 6px; display: inline-block; margin-right: 5px;">2</span> Step</li> <li><span style="background-color: #008080; border-radius: 50%; padding: 2px 6px; display: inline-block; margin-right: 5px;">3</span> Step</li> <li><span style="background-color: #008080; border-radius: 50%; padding: 2px 6px; display: inline-block; margin-right: 5px;">4</span> Step</li> </ul>	<p><i>What prevents or supports practice of the behavior?</i></p> <p><b>Structural</b></p> <ul style="list-style-type: none"> <li>Accessibility</li> <li>Provider competencies</li> <li>Experience</li> </ul> <p><b>Social</b></p> <ul style="list-style-type: none"> <li>Family and community support</li> <li>Gender</li> <li>Norms</li> </ul> <p><b>Internal</b></p> <ul style="list-style-type: none"> <li>Attitudes and beliefs</li> <li>Self-efficacy</li> <li>Knowledge</li> <li>Skills</li> </ul>	<p><i>Who must support the practice of the behavior?</i></p> <p><b>Institutional</b></p> <ul style="list-style-type: none"> <li>Policy makers</li> <li>Managers</li> <li>Logistics personnel</li> <li>Providers</li> <li>Employers</li> </ul> <p><b>Community</b></p> <ul style="list-style-type: none"> <li>Community leaders</li> <li>Religious leaders</li> <li>Teachers</li> </ul> <p><b>Household</b></p> <ul style="list-style-type: none"> <li>Family members</li> <li>Male partners</li> </ul>	<p><i>How might we best focus our actions?</i></p> <p><b>Enabling Environment</b></p> <ul style="list-style-type: none"> <li>Financing</li> <li>Institutional capacity building</li> <li>Partnerships and networks</li> <li>Policies and governance</li> </ul> <p><b>Systems, Products and Services</b></p> <ul style="list-style-type: none"> <li>Infrastructure</li> <li>Products and technology</li> <li>Supply Chain</li> <li>Quality Improvement</li> </ul> <p><b>Demand and Use</b></p> <ul style="list-style-type: none"> <li>Advocacy</li> <li>Communication</li> <li>Collective Engagement</li> <li>Skills building</li> </ul>

### USING BEHAVIOR PROFILES

<sup>12</sup> [https://thinkbigonline.org/behavior\\_profile\\_p](https://thinkbigonline.org/behavior_profile_p)

Because Behavior Profiles present a logical, holistic analysis that should underlie all development work, you can use the profiles for a variety of purposes. Creating context-specific Behavior Profiles can help you:

1. Develop and design strategies, projects, and activities that together address all identified factors and leverage all supporting actors.
2. Identify project- and activity-level strategies (illustrative interventions) that directly impact the behavior or the factors that influence the behavior in your context.
3. Define a research agenda to fill gaps in the available information. Constructing Behavior Profiles will identify gaps in understanding and knowledge of factors, actors, and strategies required to enable behavior change.
4. Focus measurement on behaviors rather than interventions and on impact and outcomes rather than outputs. Ask: Does this indicator directly measure a behavior, step, factor, action, or intervention? If not, is it the closest proxy measure? If not, is it worth measuring? Why?
5. Throughout the program cycle, ensure that interventions are tied to and measured against behaviors and the factors determining them. Behavior Integration: Principles and Scoring Sheet for Portfolio Development and Management can assist with this.
6. Identify, align, build consensus, and stimulate action among partners at all levels on a cost-effective, sustainable, and integrated set of inputs required to achieve positive behavior change.
7. Coordinate interventions implemented by one or more partners to ensure a comprehensive set of interventions are happening at the same time in the same place to ensure maximum impact. Map and Coordinate Implementing Partner Activities provides specific guidance on coordinating activities.
8. Promote transparency and mutual accountability by showing stakeholders their and others' roles in enabling change.

## Validated Behavior Profile with Prioritized Factors

This behavior profile was validated by educators and administrators who are working in adult education programs that are seeking to improve the uptake and use of digital tools. View the interactive data visualization tool on the ThinkBig website [here](#).

**Goal:** Educators purposefully plan and routinely use digital technologies across the curriculum, providing learners with frequent and consistent opportunities to develop digital skills, gain agility, and increase confidence to be empowered users of technology.

Behavior	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
Educators regularly integrate digital tools into their practice, actively engaging students in daily technology use that supports learning of both academic content and digital skills.  Steps (Cycle): 1. Educators <a href="#">design or curate and adapt</a> structured, evidence-based activities,	<b>Barrier:</b> Students' behaviors and experiences.	Instructors; Household members	New area for exploration and investment; Not addressed by current WE programming.
	<b>Barrier:</b> Lack of staff confidence using technology, fear of failure	World Education; Peer Instructors	With support from the coach, each program will develop tech integration routines based on program needs and resources and create an Edtech Strategy Routine Library.
	<b>Barrier:</b> Lack of staff training using technology (knowledge)	World Education; Peer Instructors	World Education will actively seek opportunities to highlight program accomplishments, including adding routines to the Edtech Integration Strategy Toolkit, if applicable, or presenting their work on the Edtech Integration Strategy Toolkit.  Plan and facilitate a meeting with programs to share their work and best practices.

Behavior	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
<p>particularly Edtech Routines</p> <p>2. Educators <u>use</u> structured, evidence-based activities or Edtech Routines</p> <p>3. Educators regularly reflect on their technology integration practices, assess the effectiveness of their instructional strategies and activities, and incorporate regular use of edtech routines based on their findings.</p>	<p><b>Barrier:</b> Lack of training on how to incorporate tech tools into instruction</p>	<p>World education; Administrators</p>	<p>Offer personalized and cohort-based coaching to participating Boston programs to facilitate intentional tech integration into their curriculum as defined in this project*</p> <p>With support from the coach, each program will develop tech integration routines based on program needs and resources and create their own Edtech Integration Strategy Toolkit</p> <p>World Education will offer an additional coaching session at the beginning of fall to see how the implementation of the Edtech Strategy Toolkits is going and help programs troubleshoot any challenges observed up to that point.</p> <p>World Education will offer coaching from February to September, giving programs ample opportunities to learn, develop, use, and adapt routines.</p>
	<p><b>Motivator:</b> Dedicated staff for technology integration (e.g., digital coordinator, etc.)</p>	<p>Funders; Administrators</p>	<p>New areas for exploration and investment; investments supported by this initiative were</p>

Behavior	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<p><b>Barrier:</b> Staff time and workload for digital integration.</p>		<p>reported by respondents as “critical” to their programming.</p>
	<p><b>Barrier:</b> Teachers being asked to take up IT/instructional tech roles as extra task (without additional time or compensation).</p>	<p>Administrators Donors</p>	
	<p><b>Barrier:</b> Belief that using technology and digital literacy, more broadly, takes up too much class time.</p>		
	<p><b>Barrier:</b> Lack of <u>awareness</u> of types of technology (this may include teachers and learners).</p>	<p>Administrators</p>	<p>Offer webinars to ensure programs are aware and knowledgeable about the state-approved digital literacy frameworks and <b>available resources for tech integration planning.</b></p> <p>OWD offered unrestricted grants for programs to purchase or invest in any previously identified (during Phase I) tech needs.</p>
	<p><b>Barrier:</b> Lack of <u>access</u> to technology (teachers or learners)</p>	<p>Administrators; Household members</p>	<p>Area for additional investment (Technology procurement – outside of WE scope)</p>

Behavior	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
			<p>While programs received USD \$43,000 via the City of Boston, evaluators could not confirm if the funds were used for equipment or learner/teacher devices. There is no other direct funding a program can access to support this need. To respond to this gap, many programs in Boston are partnering with Tech Goes Home—a program that provides digital skills training, and a device for participants to take home after they complete the training. Not all learners participate in this program, so as far as this evaluation team is aware, access to technology continues to be a need.</p>
	<p><b>Barrier:</b> Insufficient funds or time to investigate and purchase tech tools</p>	<p>Funders</p>	

Behavior	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<p><b>Barrier:</b> Lack of incentive to use (More work, part-time, equal pay)</p>	<p>Administrators</p>	<p>Plan and facilitate a final meeting with programs to share their work and best practices.</p> <p>World Education will actively seek opportunities to highlight program accomplishments, including adding routines to the Edtech Integration Strategy Toolkit, if applicable, or presenting their work on the Edtech Integration Strategy Toolkit.</p> <p>Badge Program</p>
	<p><b>Barrier:</b> Lack of state/local standards for digital literacy (What are we teaching? What skills are important?)</p>	<p>Government / Policy makers; Administrators</p>	<p>Offer webinars to ensure programs are aware and knowledgeable about the State approved digital literacy frameworks and available resources for tech integration planning.*</p> <p><b>State government could explore the feasibility and usefulness of developing a digital literacy framework and priority skills for promotion building off the DigLit experience.</b></p>

## Original Behavior Profile

This behavior profile was developed by World Education using their experiences with and available evidence on digital tools and literacy in adult education. View the interactive data visualization tool on the ThinkBig website [here](#).

**Goal:** Educators purposefully plan and routinely use digital technologies across the curriculum, providing learners with frequent and consistent opportunities to develop digital skills, gain agility, and increase confidence to be empowered users of technology.

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
<p>Educators regularly integrate digital tools into their practice, actively engaging students in daily technology use that supports learning of both academic content and digital skills.</p> <p>Steps (Cycle):</p> <p>4. Educators <u>design or curate and adapt</u> structured, evidence-based activities, particularly Edtech Routines</p>	<p><b>Barrier:</b> Belief that introducing the tech skills in the classroom is no longer necessary (we are back to face-to-face) or important (learners are too low level).</p>	<p>Administrators ; World Education</p>	<p>Offer personalized and cohort-based coaching to participating Boston programs to facilitate intentional tech integration into their curriculum as defined in this project.</p> <p>World Education will offer an additional coaching session at the beginning of fall to see how the implementation of the Edtech Strategy Toolkits is going and help programs troubleshoot any challenges observed up to that point.</p> <p>Community of practice (being built)</p>
	<p><b>Barrier:</b> Tech integration on the program, instructional, and learner level is optional in many education centers.</p>	<p>Administrators ; World Education</p>	<p>Edtech Routines <i>provide a step-by-step format to effectively, strategically, and intentionally integrate technology into the curriculum in a way that ties the practice to what administrators care about-</i></p>

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
<p>5. Educators <u>use</u> structured, evidence-based activities or Edtech Routines</p> <p>6. Educators regularly reflect on their technology integration practices, assess the effectiveness of their instructional strategies and activities, and incorporate regular use of edtech routines based on their findings.</p>	<i>improving learning and attendance/completion.</i>		
	<p><b>Barrier:</b> There is a separate Technology class being offered. Therefore, tech integration is absent program-wide because it is being "covered" by a separate class.</p>	<p>Administrators ; Peer Instructors</p>	
	<p><b>Barrier:</b> Belief that using technology and digital literacy more broadly takes up too much class time.</p>	<p>Peer Instructors</p>	
	<p><b>Barrier:</b> Lack of staff training using technology (knowledge)</p>	<p>World Education; Peer Instructors</p>	<p>With support from the coach, each program will develop tech integration routines based on program needs and resources and create its own Edtech Integration Strategy Toolkit</p> <p>Establish a centralized location (Google site, Google Group, and Google Drive) to share information, resources, and templates and to communicate with programs effectively. All the information will be organized on the Google site, which will serve as a repository of resources developed by the Boston programs.</p>

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<p><b>Barrier:</b> Lack of staff confidence using technology, fear of failure</p>	<p>World Education; Peer Instructors</p>	<p>With support from the coach, each program will develop tech integration routines based on program needs and resources and create an Edtech Integration Library.</p> <p>World Education will actively seek opportunities to highlight program accomplishments, including adding routines to the Edtech Integration Strategy Toolkit, if applicable, or presenting their work on the Edtech Integration Strategy Toolkit.</p> <p>Plan and facilitate a final meeting with programs to share their work and best practices.</p>
	<p><b>Barrier:</b> Lack of <u>awareness</u> of types of technology (this may include teachers and learners).</p>	<p>Administrators</p>	<p>Offer webinars to ensure programs are aware and knowledgeable about the state-approved digital literacy frameworks and <b>available resources for tech integration planning.</b></p> <p>OWD offered unrestricted grants for programs to purchase or invest in any previously identified (during Phase I) tech needs.</p>
	<p><b>Barrier:</b> Lack of <u>access</u> to technology (teachers or learners)</p>	<p>Administrators ; Funders</p>	<p>(Technology procurement – outside of WE scope)</p>

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<b>Barrier:</b> Insufficient funds or time to investigate and purchase tech tools	Administrators ; Funders	
	<b>Barrier:</b> Lack of IT support staff	IT support staff Instructor peer support staff	<p>(Staff procurement – outside of WE scope)</p> <p><b>With support from the coach,</b> each program will develop tech integration routines based on program needs and resources and create its own Edtech Integration Strategy Toolkit</p> <p>Plan and facilitate a final meeting with programs to share their work and best practices.</p> <p>With support from the coach, each program will develop tech integration routines based on program needs and resources and create their own Edtech Integration Strategy Toolkit</p>
	<b>Barrier:</b> Lack of awareness that there is a distinction between IT support and instructional technology.	Administrators ; Peer Instructors	
	<b>Barrier:</b> Teachers being asked to take up IT/instructional tech roles as an extra task (without additional time or	Administrators	

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	compensation)		
	<p><b>Barrier:</b> Lack of training on how to incorporate tech tools into instruction</p>	<p>World Education; Administrators</p>	<p>Offer personalized and cohort-based coaching to participating Boston programs to facilitate intentional tech integration into their curriculum as defined in this project*</p> <p>With support from the coach, each program will develop tech integration routines based on program needs and resources and create their own Edtech Integration Strategy Toolkit</p> <p>World Education will offer an additional coaching session at the beginning of fall to see how the implementation of the Edtech Strategy Toolkits is going and help programs troubleshoot any challenges observed up to that point.</p> <p>World Education will offer coaching from February to September, giving programs ample opportunities to learn, develop, use, and adapt routines.</p>
	<p><b>Barrier:</b> Lack of state/local standards for digital literacy (What are we teaching? What skills are important?)</p>	<p>Government/ Policy makers: Administrators</p>	<p>Offer webinars to ensure programs are aware and knowledgeable about the State approved digital literacy frameworks and available resources for tech integration planning.*</p>

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<p><b>Barrier:</b> Lack of incentive to use (More work, part-time, equal pay)</p>	<p>Administrators</p>	<p>Plan and facilitate a final meeting with programs to share their work and best practices.</p> <p>World Education will actively seek opportunities to highlight program accomplishments, including adding routines to the Edtech Integration Strategy Toolkit, if applicable, or presenting their work on the Edtech Integration Strategy Toolkit.</p> <p>Badge Program</p>
	<p>Training using technology is not often linked to an incentive teacher professional development leaders care about, which is improving learning and attendance/completion.</p>	<p>Administrators</p>	

Behavior:	Factors	Supporting Actors	Supporting Actor Actions/ Edtech Activities
	<p><b>Barrier:</b> Insufficient time for planning (instructors are part-time)</p>		<p>Educators can design structured, evidence-based activities or Edtech Routines to explicitly integrate technology into instruction (can create Edtech Routines and use them)</p> <p>Establish a centralized location (google site) to share information, <b>resources, and templates</b> and to communicate with programs effectively. All the information will be organized on the google site, which will serve as a repository of resources developed by the Boston programs.</p>
	<p><b>Barrier:</b> Lack of awareness of the power of contextualized skill instruction—the connection between supported use and digital resilience</p>		