



Using Digital Technologies to Support Adult Learners' Success in Basic Skills

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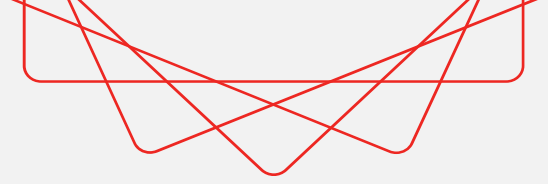
EBSN Annual Conference 2023 | Pécs, Hungary

June 15, 2023



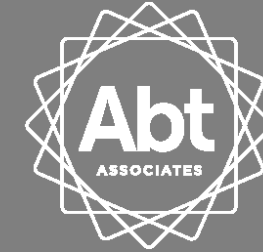
**BOLD
THINKERS
DRIVING
REAL-WORLD
IMPACT**

Using Digital Technologies to Support Adult Learners' Success in Basic Skills



PRESENTATION on:

- Framework for research on using technology tools to teach and support adult basic skills learners
- Current research
- New directions to consider in expanding the research base



Judith Alamprese
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- ✓ **Questions from participants**
- ✓ **Question to participants:** *What are pressing needs for knowledge about the use of digital technologies in adult basic skills?*

Current U.S. Research: CREATE Adult Skills Network

Collaborative Research for Educating Adults with Technology Enhancement



Network Lead: Develop research and learning agendas; Identify promising practices | Provide forums for collaboration | Disseminate



American Institutes for Research, Abt Associates, EdTech Center @ WorldEd, Jobs for the Future

Six Research Teams

1. Adult Numeracy in the Digital Age

2. Adult Skills Assessment Project

3. AutoTutor for Adult Reading Comprehension

4. Content-Integrated Language Instruction for Adults with Technology Support

5. Teaching Skills That Matter - SkillBlox Instructional Support

6. Writing in Adult Secondary Education Classes

Funded by U.S. Department of Education, Institute of Education Sciences

Framework: Stages of Development and Use of Digital Technologies in Adult Education

Stakeholders Involved in Different Stages

Developers, Funders, State Policymakers, Professional Developers, Program Administrators, Program Staff, Adult Learners, Researchers and Evaluators



Building Knowledge and Evidence Using Varied Research Designs and Methods

Assessment Development, Descriptive Studies, Correlational Studies, Experimental Studies

Overview of Literature Review

Criteria for Selecting Literature



2010 and later



Journal articles, research and technical reports, literature syntheses



Adult skills, postsecondary education, workforce development, continuing ed.



Experimental, correlational, descriptive studies (qualitative, quantitative) studies

Approach

- Initial review of 2,000+ documents
- Examine patterns and topics, key questions addressed, limitations

Types of Studies and Research Syntheses

Considerations in Reviewing Research Literature

- Advances in technologies limit usefulness of “older” studies
- Varying quality of studies: samples, methods, analysis procedures
- Range of topics of studies, questions addressed
- Limited information about design and use of interventions

Trends in Research: Developing Technologies



Developing Technologies

- Adequacy of framework(s)/theories for new technology tools with target population
- Adequacy of technology tools to address content to be taught to target population
- Use of pilot test to assess adequacy of content and tools to guide revisions or enhancements

Trends in Research: Preparing Users of Technologies



Preparing Users of Technologies

- There are limited studies of professional development opportunities to prepare staff and learners, particularly in the United States
- Computer skills training, online collaborative learning, coding literacy—wide variation in evidence of effectiveness

Trends in Research: Implementing Technologies



Implementing Technologies

- Extent to which learners' baseline technology skills were adequate for using technology tools
- Extent to which staff used technology tools as intended
- Extent to which purposes of technology tools were aligned to learners' needs
- Adequacy of technology infrastructure to support use of technology tools

Implementing Technologies: Research Topics

- Characteristics & Use of Interventions
 - Descriptions of tech interventions (e.g., AutoTutor; use of individual text messaging; ALEX)
- Population-related Studies
 - Uses of tech tools across learner populations (e.g., older adults)
 - Characteristics of learners using interventions
 - Use of tech tools with ELL learners
- Role of technology/support tools in enhancing teaching of disciplines
- Factors affecting Implementation
 - Barriers to implementation with adults with learning disabilities

Trends in Research: Assessing Outcomes and Impacts



Assessing Outcomes & Impacts from Use of Technology

- Extent to which learners developed their skills and knowledge from using tools
- Learners' perceptions of technology tools' helpfulness in developing their skills and knowledge
- Instructors' perceptions of technology tools' helpfulness in developing learners' skills and knowledge

Assessing Outcomes and Impacts for Use of Technologies: Research Topics

- Processes and Factors Related to Use of Technology (can be categorized as implementation or outcome depending on study)
 - Self-regulation
 - Collaborative problem-solving
 - Role of altruism and social capital
 - Shifts in use related to experience using technology
 - Characteristics of gaming platforms
- Outcomes
 - Use of ALEX in supporting literacy and essential skills training
 - Effects of different types of tech interventions (e.g., gaming platform) on ELL learners' vocabulary acquisition
- Impacts

Implications of Review of Research in Building Knowledge Base

Need:

- To prioritize topics for research on using digital technologies with learners
- In-depth information about interventions and their implementation
- To consider applicability of examples from industry-based training
- Rigorous impact studies focused on adult foundational skills learners, instructors
- To evaluate saturation of specific technologies in adult foundational skills

Technology-Based Coaching in Adult Education (TBCAE)



Purpose

Provide technical assistance to 4 state adult education (AE) offices and 10 local AE programs in exploring the use of individual text messaging that:

- Motivates adult education students persist in their learning
- Helps students achieve their educational goals
- Involves advisors/navigators and instructional staff



Products

- TBCAE Toolkit
- TBCAE Final Report

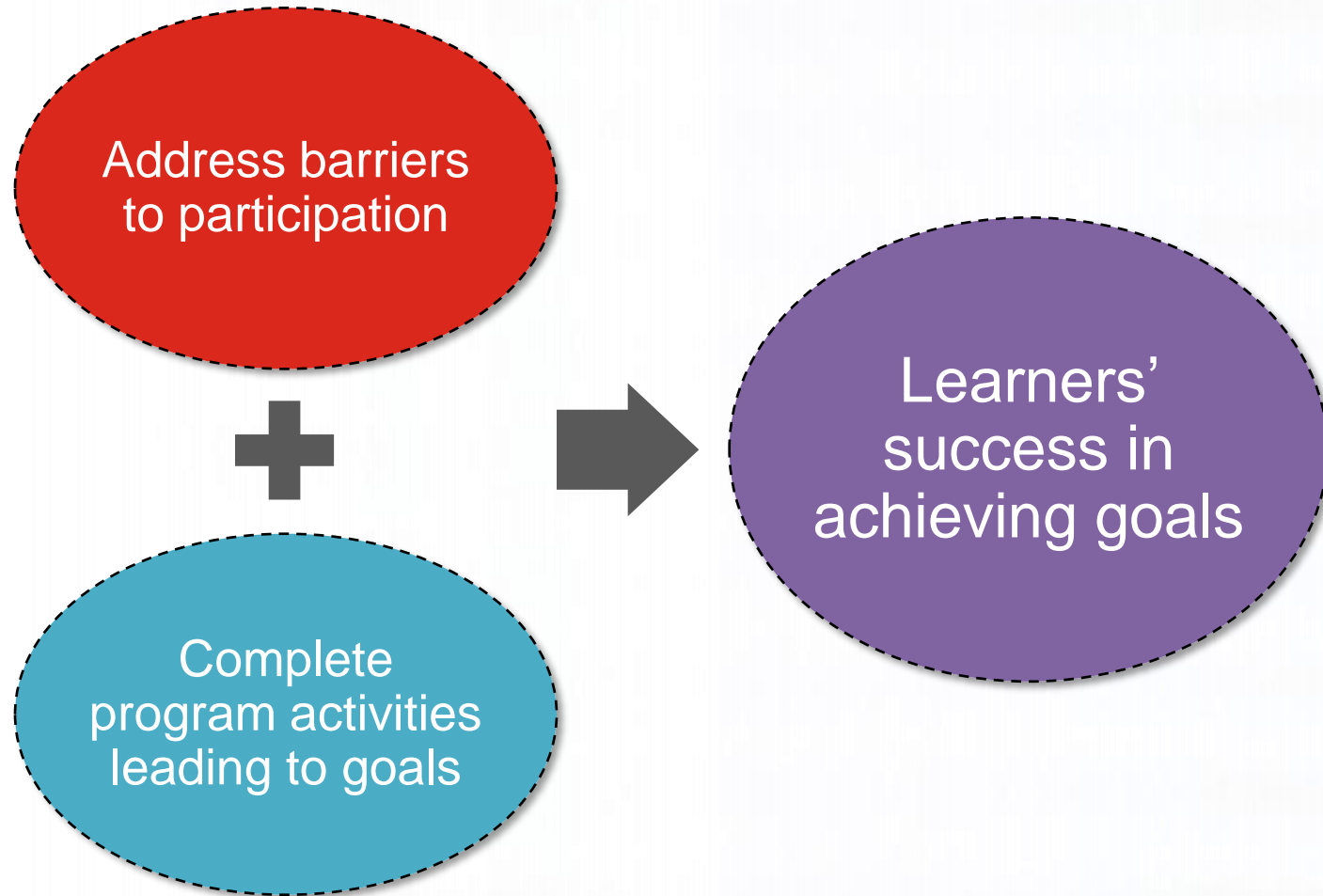
Judith Alamprese, Project Director



Funder

- U.S. Department of Education, Office of Career, Technical, and Adult Education (OCTAE) 2019-2022

Assumption Guiding TBCAE: Text Messaging Can Help Learners Make Progress Toward Their Educational Goals



Key Approach: Send Individual Text Messages that Support Learners' Progress toward Their Educational Goals

Individual/ Personalized Text Messages

For Targeted Messages Related to Learner Goals

Group Text Messages

For General Program Announcements and Reminders

Findings: Summary of TBCAE Participation

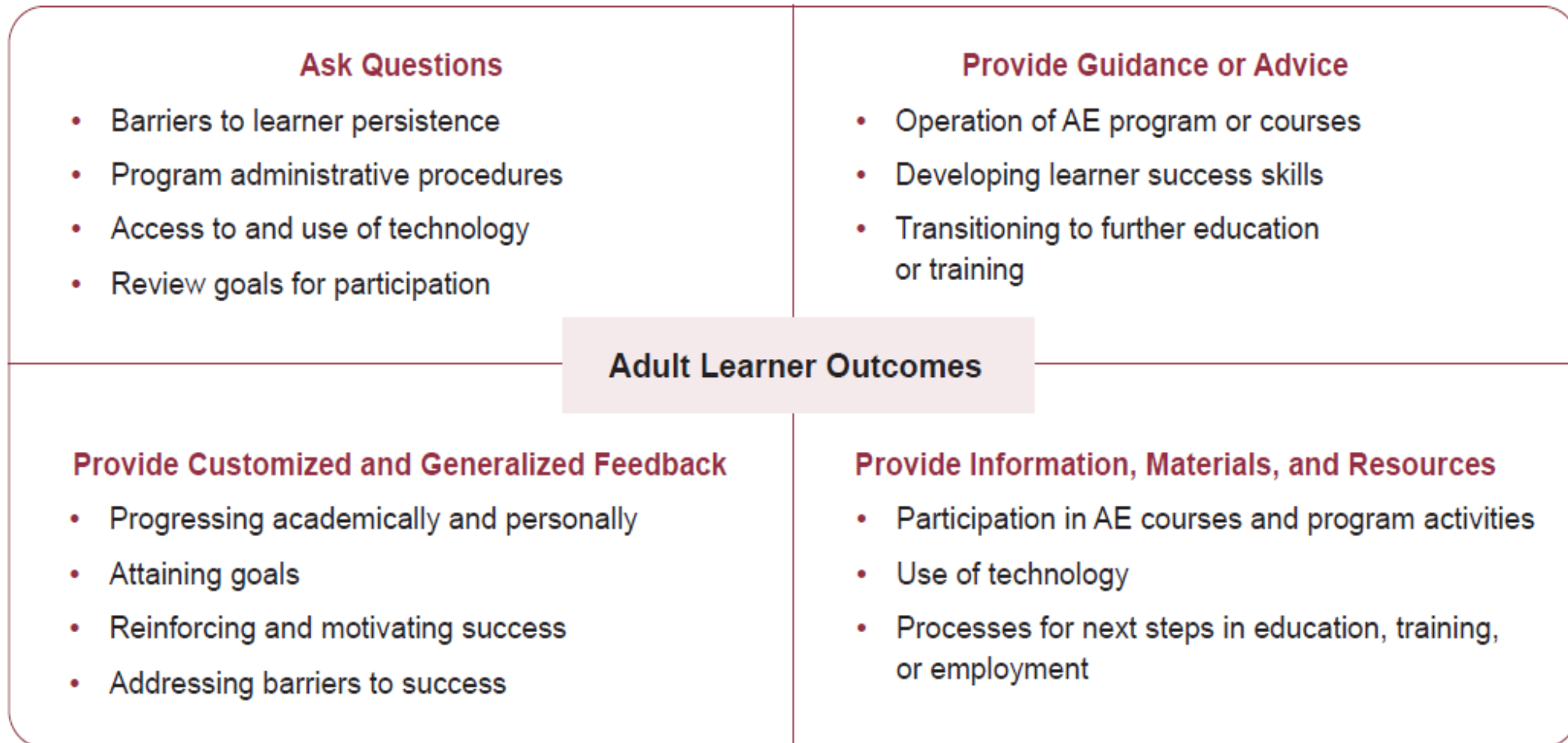


Participants	Number
Adult Education Programs	10
Adult Education Program Sites	14
Staff Who Sent Text Messages	25
Learners Who Received Initial Message and Responded	286
Learners Who Received Initial Message and Did Not Respond	106

Types of Text Messages Sent by Staff	Number
Text Message Conversations	1,572
Group Text Messages	343



Types and Topics of Text Messages that Support Learners' Goal Attainment



Topics of Individual Text Messages



Program Management

Administrative Procedures

Use of Technology

COVID-Related Information

Learner Progress

Learners' Overall Progress

Learners' Academic Progress

Preparing For & Earning an HSE

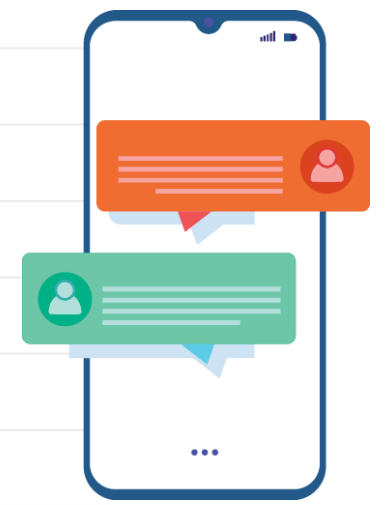
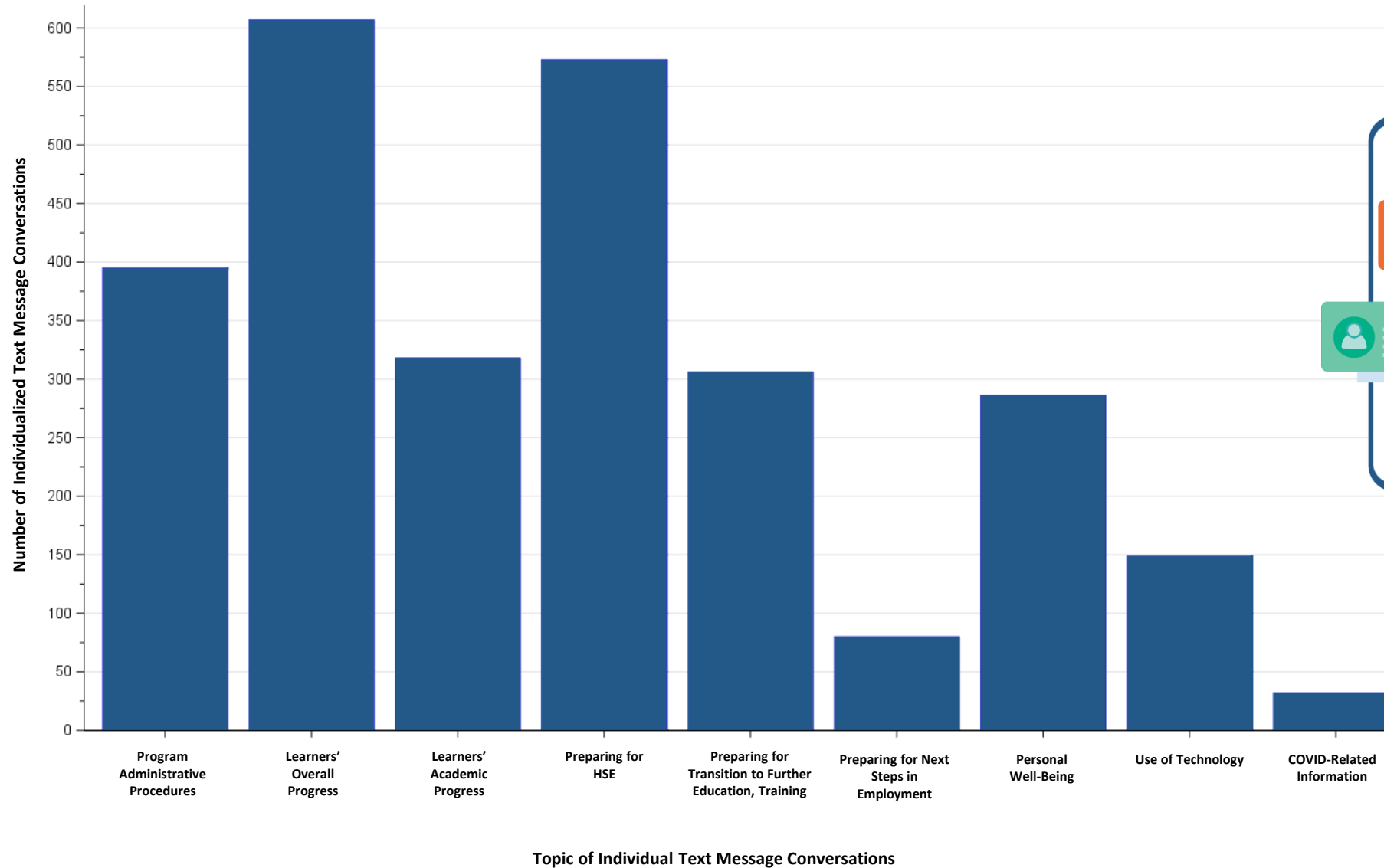
Personal Well-Being

Learner Transition

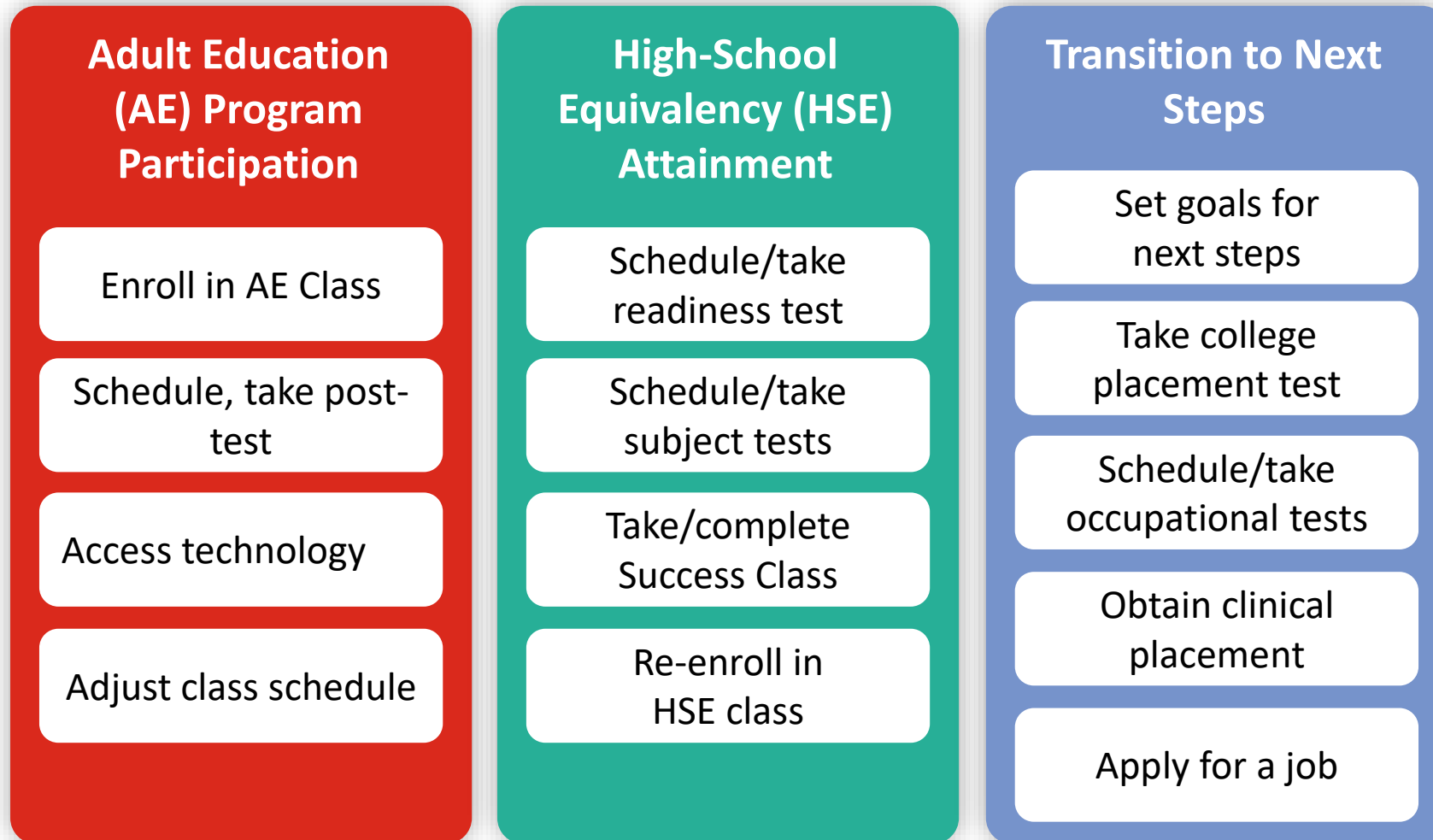
Next Steps for Education, Training

Next Steps for Employment

Topics of Text Message Conversations (Number)



Learners' Progress Facilitated by Text Messaging



Facilitating Factors and Challenges for Staff Using Individual Text Messaging



Facilitating Factors

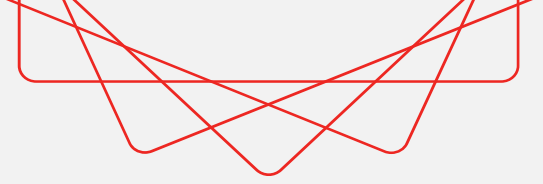
- Text messaging platforms are easy to use
- The available prompts in the TBCAE Toolkit can be easily adapted in sending targeted text messages
- Learners' progress can be tracked and can reinforce learners and staff



Challenges

- Determining schedule and process for using text messaging efficiently
- Keeping motivated when learners do not respond to text messages
- Determining the line between nurturing and nagging in reminding learners about things they need to complete

Considerations in Building Knowledge



- **Assumptions** about learners in developing or adapting tech tools, and expected outcomes from use of tools



- **Variety** of **tech tools** being used and implications for structuring knowledge about tools

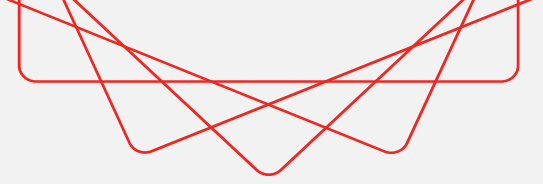


- Factors affecting learners' **engagement** in using tech tools and implications for supporting learners use of tools



- Range of knowledge needed to understand current practices and their effectiveness and implications for **research designs, types of data, and cycles of studies** needed to answer questions of interest

Contact Information



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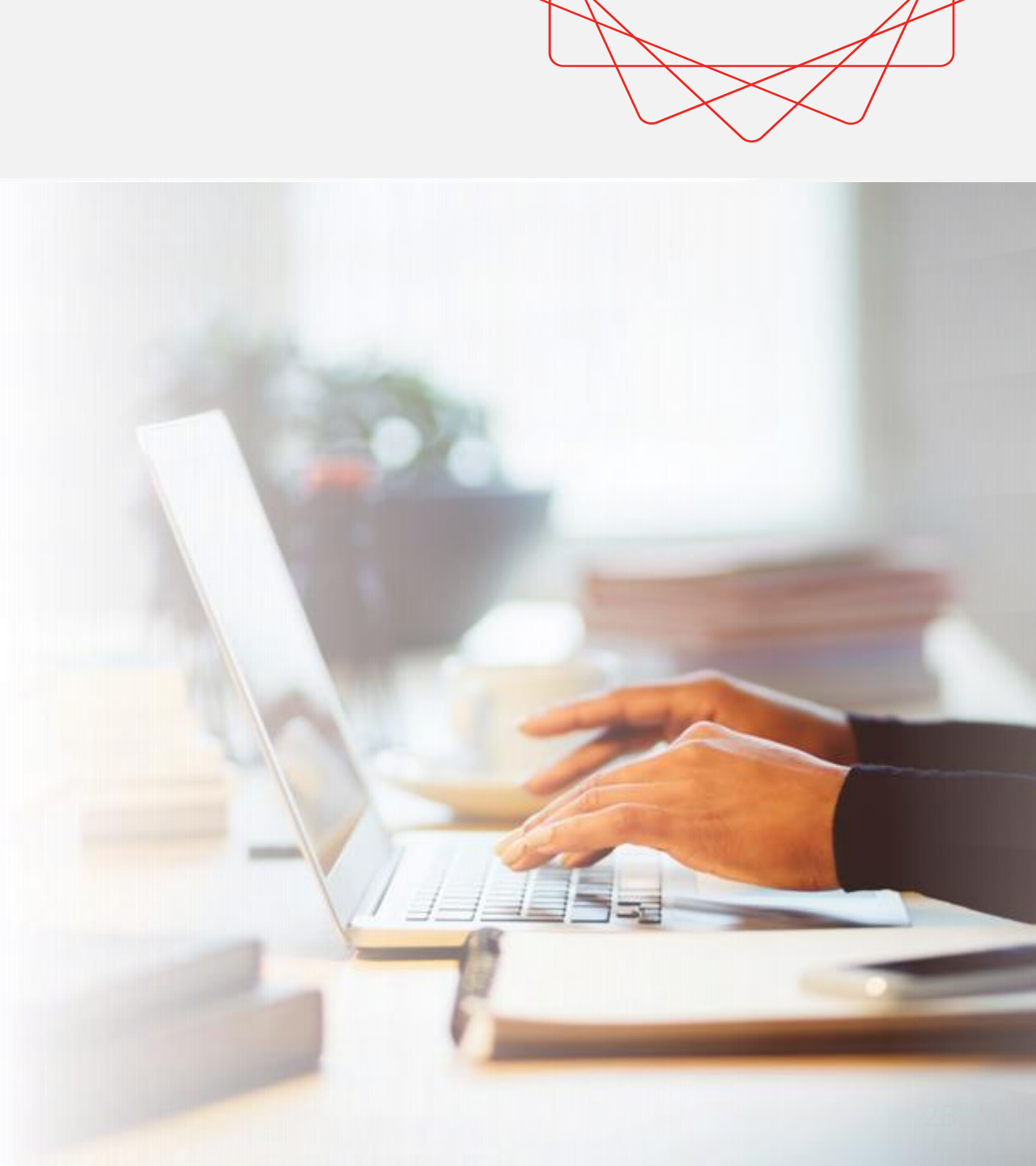
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Thank you!