

Adult Education Strategies: Identifying and Building Evidence of Effectiveness

National Center for Education Evaluation



Nearly 43 million U.S. adults lack the basic English literacy skills required to succeed in the workforce and achieve economic self-sufficiency.¹ The Workforce Innovation and Opportunity Act (WIOA) is the key federal investment helping adults acquire these and other important skills, as well as to earn a high school equivalency credential. WIOA encourages adult education programs to use evidence-based strategies to improve services and participant success. This systematic research review suggests a need for more rigorous studies, as there is not yet much evidence to guide decision making around instructional and support strategies for adult learners.

Identifying Effective Adult Education Strategies

Adult education's mission is a critical one. It seeks to provide the large and diverse population of adults who lack basic skills, a high school credential, or English language skills with the competencies they need to be productive workers, family members, and citizens. Federally funded adult education serves learners in three types of programs: adult basic education, adult secondary education, and English as a second language (Exhibit 1).

Succeeding in this mission requires that policymakers and local providers choose wisely from among a wide array of possible instructional and support strategies for adult learners. At the federal and state levels, policy and technical assistance efforts can emphasize particular strategies to encourage their adoption by local providers. At the local level, adult education providers need to select the specific strategies to use in their programs. In each case, focusing on strategies that have been shown to lead to positive outcomes for adult learners can increase the likelihood that adult education programs equip their participants with skills to help them succeed.

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While policymakers and providers can learn from their everyday experiences, it is also important for them to have valid and reliable research-based information on what works. Well-designed, rigorous studies are the best way to be sure that learner outcomes are truly the result of the strategies of interest. Summarizing all the study results for each strategy is important because individual studies may report conflicting findings, providing an incomplete picture of all available evidence.

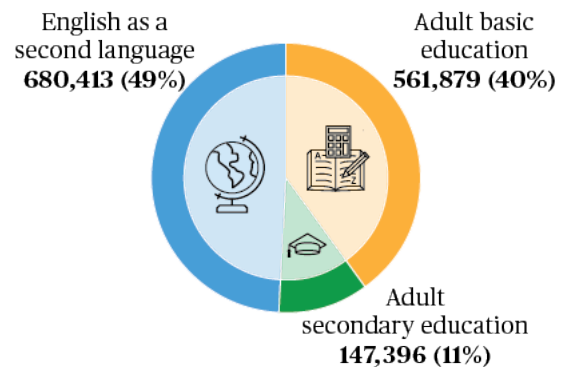
Title II of the Workforce Innovation and Opportunity Act of 2014 recognizes these evidence needs and authorizes national activities to support them. It directs the federal government to conduct a national assessment of adult education, including activities to understand the extent to which adult education strategies positively affect learners. A systematic review of the research on the effectiveness of particular strategies in adult education is one way in which the U.S. Department of Education is fulfilling this mandate.

This snapshot reports on that systematic review. This is the first review of a broad set of strategies in adult education to apply the standards and procedures of the U.S. Department of Education’s What Works Clearinghouse. It summarizes for policymakers and local providers the evidence base for many of the strategies authorized under Title II. It is designed to identify which strategies have evidence of effectiveness and where gaps appear in the evidence base. With this information, policymakers and practitioners can better understand the extent to which evidence supports particular strategies and which areas require additional studies.

Data and Analysis

The study team conducted a broad search to identify studies that examined the effectiveness of adult education strategies in improving adult learner outcomes.ⁱⁱ These studies included programs, activities, or services allowable under Title II.ⁱⁱⁱ The search focused on studies that examined whether the strategies improved learner outcomes in one or more of four areas: academic skills, educational progress, employment, and earnings. The review focused on

Exhibit 1. Federally supported adult education serves learners in three types of programs



Source: National Reporting System for Adult Education for program year 2017-18. <https://www.nrsweb.org/sites/default/files/Topic-1-Enrollment-508.pdf>

Notes: Adult basic education serves learners with skills below the ninth-grade level. Adult secondary education serves learners with skills at least at the ninth-grade level. English as a second language serves learners with a first language that is not English.

these areas because they are closely tied to the goals of adult education emphasized under Title II and directly relate to the outcomes for which federally supported adult education programs are held accountable.

The team of certified reviewers reviewed the studies according to standards and procedures of the U.S. Department of Education’s What Works Clearinghouse. The What Works Clearinghouse was developed to identify high quality research that answers the question “What works in education?” Following the Clearinghouse’s standards and procedures enabled the study team to determine whether they could confidently attribute the effects reported by a study to the strategy tested rather than to other factors.

Studies that met the Clearinghouse’s standards for well-conducted effectiveness studies were organized using seven adult education categories (Exhibit 2). These categories capture many, though not all, of the wide variety of strategies employed by adult education programs, including strategies closely

aligned with Title II’s focus on postsecondary education transitions and workforce development. For example, the *literacy instruction* category includes strategies like ‘explicit instruction on reading’ and ‘extended reading practice.’ Using descriptions provided in the studies, the review team identified the strategies examined in each study and the appropriate category(ies) for each strategy (see Appendix A for details). Organizing the strategies into categories enabled the study team to see where research has been conducted and where gaps exist.

Key Findings

To date, there has been little rigorous research on whether particular strategies in adult education improve learner outcomes.

- **The review identified a total of 22 high-quality studies that examined whether a particular adult education strategy or combination of strategies improved learners’ outcomes.** Although the study team found more than 2,000 publicly available adult education references—such as reports, papers, and journal articles—most of this literature did not examine the effectiveness of an adult education strategy. Only 54 studies examined the effectiveness of such strategies in improving the academic skills, educational progress, employment, or earnings of learners.^{iv} Of these, only 22 met the What Works Clearinghouse’s standards, meaning that the study used a rigorous design to establish effectiveness and therefore the field can have confidence in its findings.^v These 22 studies examined the effects of a wide range of adult education strategies (Exhibit 3).
- **Most of the studies examined the effectiveness of *literacy instruction* strategies for adult learners.** Thirteen of the 22 studies that met standards examined literacy strategies alone, and an additional study examined literacy strategies in combination with other strategies.^{vi} The research’s emphasis on literacy instruction is not surprising, as improving literacy skills has

Exhibit 2. Categories of adult education strategies used in this review






















- **Literacy instruction:** Helping learners improve their literacy skills.
- **Numeracy instruction:** Helping learners improve their numeracy and math skills.
- **English language acquisition instruction:** Helping learners, whose native language is not English, improve their English language skills; this might also be referred to as instruction in English as a second language or English for speakers of other languages.
- **Adult secondary education:** Helping learners prepare for and obtain a high school equivalency diploma or credential.
- **Tools to improve access to instruction:** Helping learners access adult education instruction, such as distance learning, and technological solutions.
- **Career development and transition instruction:** Helping learners through opportunities to learn about, develop skills for, and prepare for employment in a specific industry or occupational sector.
- **Individualized and targeted supports for learners:** Helping learners navigate adult education, career paths, and educational paths.

Notes: These categories were developed specifically for the purpose of this evidence review. Appendix A further explains these categories, how they were developed, how they are differentiated from each other, and examples of strategies that fall under the categories

been a longstanding and explicit goal of adult education.^{vii} Literacy is a foundation of individual and community well-being; individuals with higher literacy skills have higher employment rates, higher earnings, and better health outcomes.^{viii} Yet, one in five adults in the United States has low literacy skills.^{ix} Research that identifies effective strategies for improving adult literacy has the potential to help the field meet one of its fundamental goals.

- **Several studies examined the effectiveness of *career development and transition instruction* and *individualized and targeted learner support* strategies for adult learners.** Seven of the 22 studies that met standards examined

Exhibit 3. Number of effectiveness studies within particular categories of adult education strategies, by outcome area

Category of Adult Education Strategies (Number of studies)	Adult Education Outcome Area			
	 Academic skills	 Educational progress	 Employment	 Earnings
Literacy instruction (14)	14 			
Numeracy instruction (1)	1 			
English language acquisition instruction (1)	1 			
Adult secondary education (3)	1 	2 	1 	1 
Tools to improve access to adult education instruction (2)	1 	1 	1 	1 
Career development and transition instruction (7)		5 	5 	5 
Individualized and targeted learner supports (7)		5 	5 	5 

No rigorous effectiveness studies
 1 study
 2 to 4 studies
 5 to 9 studies
 More than 10 studies

Source: The 22 studies that met What Works Clearinghouse version 4.0 standards with and without reservations.

Note: Adult education categories are not mutually exclusive, so a single study may have examined strategies in multiple categories, and some studies examined effects in two or more outcome areas. Outcomes were combined into outcome areas that align with the primary indicators of performance for programs receiving Title II funding—academic skills, educational progress, employment, and earnings. See Appendix A for additional information on how outcomes were grouped into these four adult education outcome areas.

approaches involving strategies in both of these categories; the approaches examined in two of these studies also involved strategies in *adult secondary education* and one also involved strategies in *tools to improve access*. While improving basic skills such as literacy is a long-standing and fundamental goal of adult education, WIOA also emphasizes the need to prepare adult learners for workforce success. Contextualized instruction that prepares learners for a specific industry or occupational sector and individualized supports such as career navigation services are examples of strategies designed to help learners develop and meet their career

goals. Understanding whether these strategies help learners advance toward self-sufficiency is central to the goal of Title II, and helping policymakers and practitioners understand what strategies work.

- **Only one study examined *English language acquisition instruction* strategies.** Nearly one in ten U.S. adults is considered limited English proficient. While most of these individuals are in the labor force, they earn less than those with English proficiency.^x Learners seeking to improve their English proficiency make up about half of

all those in federally funded adult education programs. These numbers underscore the need for rigorous research on instructional strategies that work best for these learners.

- **The remaining study examined a combination of strategies involving numeracy instruction, adult secondary education, and tools to improve access.** Each of these areas is important in adult education. Adults with higher numeracy skills tend to be better prepared for the demands of the workforce.^{xi} Yet nearly one in three U.S. adults lack basic numeracy skills.^{xii} This makes numeracy another important area of instruction for adult education, although one that has not experienced the significant and longstanding attention in policy discussions that literacy has.^{xiii} In addition, tools that support adult learners' access to instruction, such as educational software or distance learning approaches, are becoming more commonplace.^{xiv} Adults juggle multiple responsibilities and often need the flexibility to receive instruction at the time or place of their choosing. Finally, adult secondary education is critical in helping adults attain a secondary school credential that is often needed to succeed in the workplace. Adults with high school or occupational credentials have higher earnings than those without.^{xv} Without studies of what strategies in these areas work in improving learner outcomes, adult educators lack solid evidence to guide their instructional decisions.

The rigorous research that has been conducted does not provide information on the effectiveness of strategies on the full set of outcome areas that federal policy emphasizes.

- **Studies that included academic skills as outcomes did not look at longer term outcomes.**^{xvi} Studies examining strategies in *literacy, numeracy, and English acquisition instruction* looked at outcomes related to academic skills but did not investigate whether the strategies improved longer term educational

and labor market outcomes. This also occurred in one of the studies examining strategies in *adult secondary education* and another examining *tools to improve access to instruction*. Academic skills—such as comprehension and reading fluency for *literacy instruction*—are short-term outcomes, whereas educational progress, employment, and earnings are longer term outcomes. It is essential to know whether learners ultimately earn a credential and succeed in the labor market to understand whether the tested strategies will help learners reach Title II's long-term goals for adult education.

- **Similarly, studies that investigated longer term outcomes did not measure academic skills.** This occurred, in particular, for studies that examined strategies related to *career development and transitions* and *individualized supports*. For some strategies, like career navigation supports,^{xvii} not measuring academic skill outcomes is unsurprising, as improving academic skills is not a primary goal.^{xviii} However, without examining effects on academic skills, studies miss the opportunity to understand whether improvements in academic skills may be leading to credential attainment or success in the labor market.

The available evidence provides limited support for the use of particular adult education strategies over others, although bridge classes and integrated education and training programs offer some promise.

- **Research has yet to identify specific *literacy instruction, numeracy instruction, and English language acquisition instruction* strategies that lead to positive effects on learner outcomes.** The various studies of strategies for *literacy instruction* found no positive effects of the tested strategies on any learner outcomes. Further, the sparse studies investigating strategies in *numeracy instruction* and *English language acquisition instruction* also found no positive effects of the tested strategies (see

Appendix B for details of the individual studies' outcomes).







Bridge classes are a common adult education strategy to help learners transition from basic skills programming to postsecondary education and occupational training.

- **The limited research on bridge classes, a career development and transitions strategy, provides some evidence of effectiveness on educational progress.** Two studies examined the effectiveness of bridge classes along with other strategies like contextualized basic instruction on educational progress. One study found positive effects and the other found no effects on progress (Exhibit 4).
- **The larger set of research studies on integrated education and training - another career development and transitions strategy - provides more evidence of effectiveness in improving educational progress but inconsistent evidence for other outcomes.** Four studies investigated integrated education

and training (IET) in combination with other strategies (Exhibit 5). Although there were consistently positive effects on educational progress across the studies, there were not consistently positive effects on employment and earnings outcomes. A fifth study examined an approach that included basic skills instruction, occupational skills training, and workforce preparation, all requirements of IET, but unlike in IET the components were provided sequentially rather than integrated, along with other strategies. This study also found positive effects on educational progress but no effects on employment or earnings.^{xix}

IET is an educational model designed to provide adult learners with training for an in-demand occupation or occupational cluster while simultaneously strengthening their basic skills and building the soft skills needed for workforce success. These three components are integrated into a single set of learning objectives.

Exhibit 4. The effects of strategies involving bridge classes on adult learners' outcomes

Strategies tested by each study	Adult Education Outcome Area			
	 Academic skills	 Educational progress	 Employment	 Earnings
Bridge classes; contextualized basic skills instruction; preparation for high school equivalency test; and career navigation supports ^{xx}				
Bridge classes; contextualized basic skills instruction; and wraparound services to address basic needs and logistical barriers ^{xxi}				

The following icons indicate presence or lack of a significant effect:

 No effect  Positive effect  Negative effect  Mixed effect

Source: The two studies that examined strategies involving bridge classes that prepared learners to transition to either occupational training or college courses and that met What Works Clearinghouse version 4.0 standards with and without reservations.
















Note: Outcomes were combined into outcome areas that align with the primary indicators of performance for programs receiving Title II funding—academic skills, educational progress, employment, and earnings. Mixed effects indicate the findings within an outcome area include both statistically significant positive and statistically significant negative effects. See Appendix A for additional information on how findings were classified as no effect, positive effect, negative effect, and mixed effects.

- **Often, studies tested combinations of various strategies, making it difficult or impossible to isolate the effect of a particular strategy.**





Adult education often combines strategies to meet the needs of adult learners, and so that is what the studies evaluate. In particular, the studies that examined *career development and transitions* strategies examined these when they were used in tandem with *targeted learner supports* strategies and sometimes strategies in *adult secondary education* and *tools to improve access*. From these studies that examined a bundling of strategies, it is unclear whether a single strategy or the bundling of

strategies is responsible for any effects observed. For example, when interpreting the bridge studies, it is unclear whether bridge classes alone can be effective in improving educational progress or if bridge classes are effective only when combined with other strategies. Some strategies are bundled together frequently, like IET and wraparound services, so isolating the impacts of each strategy might be less important. Other strategies, like career navigation, may be offered on their own so there is value in understanding their unique effects.

Exhibit 5. The effects of strategies involving integrated education and training on adult learners’ outcomes

Strategies tested by each study	Adult Education Outcome Area			
	 Academic skills	 Educational progress	 Employment	 Earnings
IET through co-planning and alternate teaching; preparation for high school equivalency test; and wraparound services to address basic needs and logistical barriers ^{xxii}				
IET through co-teaching; career navigation supports; and wraparound services to address basic needs and logistical barriers ^{xxiii}				
IET through co-teaching; co-enrollment with credit courses at colleges; career navigation supports; and wraparound services to address basic needs and logistical barriers ^{xxiv}				
IET through co-teaching; co-enrollment with credit courses at colleges; career navigation supports; and wraparound services to address basic needs and logistical barriers ^{xxv}				

The following icons indicate presence or lack of a significant effect:

-  No effect
-  Positive effect
-  Negative effect
-  Mixed effect

Source: The four studies that examined strategies involving integrated education and training and that met What Works Clearinghouse version 4.0 standards with and without reservations.

Note: Outcomes were organized into outcome areas that align with the primary indicators of performance for programs receiving Title II funding—academic skills, educational progress, employment, and earnings. Mixed effects indicates the findings within an outcome area include both statistically significant positive and statistically significant negative effects. See Appendix A for additional information on how findings were classified as no effect, positive effect, negative effect, and mixed effects.

Looking Ahead

Despite the critical mission of adult education, there is limited evidence so far to guide policymakers and practitioners toward particular strategies likely to be effective in improving adult learners' outcomes. Fortunately, opportunities exist to increase the evidence base on effective adult education strategies.

- **Title II emphasizes performance measurement, data which in turn may be used in research.** Under WIOA, Title II requires that adult education programs collect data on skill gains, educational progress, employment, and earnings for program participants. The availability of these data opens new opportunities for examining whether particular adult education strategies might improve these learner outcomes.
- **Title II brings to the forefront longer term outcomes like educational attainment and success in the labor market—outcomes for which reliable data sources exist.** Whereas the Workforce Investment Act, which preceded WIOA, emphasized outcomes such as postsecondary enrollment, WIOA emphasizes longer term educational attainment and labor market outcomes. This emphasis provides opportunities to conduct research on adult education strategies with an increased focus on improving adult learner transitions to postsecondary education or to better jobs and higher earnings. Sources such as the National

Student Clearinghouse and the National Directory of New Hires may be used to accurately and reliably measure postsecondary credentials and employment.

- **There are opportunities and interest in funding research to improve the skills of adult learners.** At the federal level, WIOA mandates an independent national evaluation of adult education programs, including examining the effectiveness of adult education strategies. Additionally, the Institute of Education Sciences provides grant funding opportunities to examine the effectiveness of adult education strategies in improving learner outcomes.
- **Research can be guided by the design standards of the What Works Clearinghouse.** Following these study design standards would result in research with greater rigor. The findings from this research could be interpreted with confidence that any effect observed is due to the strategy tested. This research could therefore help identify effective strategies in adult education.

With these opportunities comes the need for the adult education field to prioritize where to put investments in research and to design and conduct rigorous evaluations. As the research builds, policymakers and local providers will then be better able to target their resources on effective strategies to help adult learners achieve successful outcomes.

ENDNOTES

- ⁱ U.S. Department of Education, National Center for Education Statistics. (2019). Adult literacy in the United States. <https://nces.ed.gov/datapoints/2019179.asp>
- ⁱⁱ See Appendix A for technical details on the approach to conducting the systematic evidence review on adult education strategies.
- ⁱⁱⁱ Allowable activities are “programs, activities, and services that include adult education, literacy, workplace adult education and literacy activities, family literacy activities, ELA activities, integrated English literacy and civics education, workforce prep activities, and IET” (see §463.30 of the Electronic Code of Federal Regulations: <https://www.ecfr.gov/>).
- ^{iv} See Appendix A for information on the process of screening the references, including why references were determined to be ineligible for review.
- ^v See Appendix B for information on the 54 reviewed studies including references, details of the 22 studies that met What Works Clearinghouse version 4.0 standards, and the effects of the strategies tested on adult learner outcomes.
- ^{vi} The additional study examined *literacy instruction* strategies in combination with strategies in *numeracy*, *adult secondary education*, and *tools to improve access*.
- ^{vii} U.S. Department of Education, Office of Vocational and Adult Education. (2013). An American heritage—Federal adult education: A legislative history 1964-2013. https://lincs.ed.gov/publications/pdf/Adult_Ed_History_Report.pdf
- ^{viii} The Literacy Center. (2018). Why literacy matters. <https://theliteracycenter.org/about/why-literacy-matters/>; Dewalt, D. A., Berkman, N. D., Sheridan, S., Lohr, K. N., & Pignone, M. P. (2004). Literacy and health outcomes: A systematic review of the literature. *Journal of General Internal Medicine*, 19, 1228-1239. doi:10.1111/j.1525-1497.2004.40153.x
- ^{ix} U.S. Department of Education, National Center for Education Statistics. (2019, July). Adult literacy in the United <https://nces.ed.gov/pubs2019/2019179.pdf>
- ^x Wilson, J. H. (2014). Investing in English skills: The limited English proficient workforce in U.S. metropolitan areas. The Brookings Institution. https://www.brookings.edu/wp-content/uploads/2014/09/metro_20140924_investing_in_english_skills_report.pdf
- ^{xi} Luminary Labs. (2017). The math gap: Implications for investing in America’s workforce. https://lincs.ed.gov/publications/pdf/Advancing_Math_Market_Scan_1.pdf
- ^{xii} U.S. Department of Education, National Center for Education Statistics. (2019). NCES commissioner’s statement on PIAAC 2017. https://nces.ed.gov/whatsnew/commissioner/remarks2019/11_15_2019.asp
- ^{xiii} Council for Advancement of Adult Literacy. (2011). Facing the challenge of numeracy in adult education. <http://www.caalusa.org/NumeracyChallenge.pdf>
- ^{xiv} EdTech Center @ World Education, Inc. (2019). Adult basic education distance learning resource site. <https://edtech.worlded.org/tips-for-distance-learning/>
- ^{xv} Grossman, J., Kato, L. Mallon, A., Maguire, S., & Conway, M. (2015). Value of a credential for disadvantaged workers: Findings from the Sectoral Employment Impact Study. The Aspen Institute. 10.13140/RG.2.1.2637.4005; Torpey, E. (2018). Measuring the value of education. *Career outlook*. U.S. Bureau of Labor Statistics.
- ^{xvi} The finding that studies investigating academic skills as outcomes did not look at longer term outcomes may be due to the particular policy context at the time the studies were conducted. Prior to WIOA, in adult education there was a greater focus on shorter-term outcomes like skills gains and postsecondary enrollment.
- ^{xvii} Career navigation supports fall in the *individualized and targeted learner supports* category.

^{xviii} The finding that studies investigating longer term outcomes did not look at academic skills may also be due in part to the context in which these studies were conducted. For example, many of these studies were not conducted within Title II programs, which require that participants' academic skills be measured.

^{xix} Hamadyk & Zeidenberg, 2018

^{xx} Martin, V., & Broadus, J. (2013). Enhancing GED instruction to prepare students for college and careers: Early success in LaGuardia Community College's Bridge to Health and Business Program. MDRC.

^{xxi} Cook, R., Hamadyk, J., Zeidenberg, M., Rolston, H., & Gardiner, K. (2018). Madison area technical college patient care pathway program: Implementation and early impact report (OPRE Report No. 2018-48). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation.

^{xxii} Miller, C., Millenky, M., Schwartz, L., Goble, L., & Stein, J. (2016). Building a future: Interim impact findings from the YouthBuild evaluation. MDRC.

^{xxiii} Anderson, T., Kuehn, D., Eyster, L., Barnow, B., & Lerman, R. (2017). New evidence on integrated career pathways: Final impact report for Accelerating Opportunity. Urban Institute.

^{xxiv} Glosser, A., Martinson, K., Cho, S. W., & Gardiner, K. (2018). Washington State's integrated basic education and skills training (I-BEST) program in three colleges: Implementation and early impact report (OPRE Report No. 2018-87). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation.

^{xxv} Modicamore, D., Lamb, Y., Taylor, J., Takyi-Laryea, A., Karageorge, K., & Ferroggiaro, E. (2017). Accelerating connections to employment. Volume II: Final evaluation report appendices. ICF.