

Cummins, P., Harrington, A. K., & Yamashita, T. (2021). Individual learning accounts: A comparison of implemented and proposed initiatives. *Adult Learning*. Online ahead of publication. <https://doi.org/10.1177/10451595211046971>

### **Individual Learning Accounts: A Comparison of Implemented and Proposed Initiatives**

Phyllis A. Cummins, Ph.D.,\* Scripps Gerontology Center, Miami University, 100 Bishop Circle, 396 Upham Hall, Oxford, OH 45056; cumminpa@miamioh.edu; (513) 529-2652.

Phyllis A. Cummins, PhD, is a Senior Research Scholar at Scripps Gerontology Center, Miami University, Oxford, Ohio. Her research foci include education and training for older workers, the role community colleges play in education and training for adults, skill development over the life course, and economic security in retirement.

A. Katherine Harrington, Ph.D., The University of Akron, Institute for Life-Span Development and Gerontology, Suite 340 College of Arts and Sciences Building, Akron, OH 44325; a.katherine.harrington@gmail.com; (757) 434-3451.

A. Katherine Harrington is an Adjunct Fellow at the Institute for Life-Span Development at the University of Akron. Her primary areas of research are adult learning and workplace training and intergenerational caregiving.

Takashi Yamashita, Ph.D., University of Maryland, Baltimore County, Public Policy Building, PUP252, 1000 Hilltop Circle, Baltimore, MD 21250; yamataka@umbc.edu; (410) 455-5938.

Takashi Yamashita, PhD, MPH, MA, is an associate professor of sociology and faculty in the Gerontology PhD Program at University of Maryland, Baltimore County. His primary areas of research are social determinants of health and well-being, wider benefits of lifelong learning, and health literacy in older population.

\*Corresponding author

## **Individual Learning Accounts: A Comparison of Implemented and Proposed Initiatives**

*ABSTRACT:* Access to lifelong learning opportunities has long been discussed in terms of the economic benefits conferred by access to and engagement in further education by members of the labor force, particularly within the global knowledge economy. However, equitable access to lifelong education opportunities, particularly for low-skilled adults in the labor force, has been lacking. The Organisation for Economic Cooperation and Development (OECD) identified three models for funding adult learning: (1) individual learning accounts (2) individual savings accounts; and (3) training vouchers. The current study discusses examples of these models, either proposed or implemented, across four countries or economic blocks - France, Canada, the United Kingdom, and the United States. In addition, to understand the importance of providing funding for education and training to adults with low levels literacy skills, we use data from the Program for the International Assessment for Adult Competencies (PIAAC) to compare participation in adult education and training (AET) by literacy skill levels. In all countries examined, adults with low literacy skills participated in AET at lower rates than those with middle and high levels of literacy skills. To be successful in reaching adults most in need of skill upgrading, financing models need to provide adequate funds for meaningful skill upgrades, have well-structured information sources (e.g., websites) that are easily navigated by the target population, and include policies to screen educational providers for program quality.

*Keywords:* Lifelong learning, funding for lifelong learning, adult education and training.

## **Background**

Adult education and training (AET) are key for all adults to enrich their quality of life in contemporary societies and is important for creating learning communities (OECD, 2016a; UNESCO, 2015). Indeed, AET is linked to more active participation in social, cultural and political activities (Campbell, 2006). Moreover, technological advancement requires adults to engage in continuous AET. To remain employable, updated job-related knowledge and skills are necessary to prevent skill obsolescence (e.g., decreasing values of job-related skills) (Kasworm, 2020; Keese, 2006; OECD, 2016a). AET includes formal (learning that results in a recognized diploma or credential), non-formal (learning that takes place in the workplace or an educational setting but does not typically lead to a formal credential), and informal learning (learning that takes place in everyday life; Commission of the European Communities 2000).

Funding is one of the lesser understood challenges for AET participation. Access to funding for continued education over the adult life course is often disproportionate resulting in low participation rates by low-skilled adults even in the wealthiest countries (International Labour Organization, 2018). Specifically, educational attainment and employment-related statuses (e.g., type of occupation, income) seem to create an AET divide. Indeed, for a majority of workers (i.e., 60% in the United States), work-related education and training is provided by their employers (Hyde & Phillipson, 2014; Pew Research Center, 2016) and is often only afforded to those with higher education and skills (OECD, 2019a). Therefore, adults who are not involved in employer sponsored AET, as well as those with lower levels of education and basic skills, such as literacy, may have limited funding sources for AET (Desjardins & Rubenson, 2013). Training subsidies for low-skilled adults can result in positive labor market outcomes (increased wages and higher employment rates; Dauth, 2020).

To increase overall AET participation, and to reach adults with lower levels of education and skills, alternative methods of financing AET have been considered. Learning accounts for higher education, where either the learner and/or another entity provides the funding for educational opportunities, can occur through multiple arrangements. The Organisation for Economic Cooperation and Development (OECD) described three types of individual learning schemes: (1) individual learning accounts which are only available if training takes place; (2) individual savings accounts which are actual accounts in which funds can accumulate over time; and (3) training vouchers that can involve co-financing from the individual and can be used for training (OECD, 2019b). Because these three programs may be directly tied to the pursuit of specific credentials for occupations in demand or be conditioned on full-time enrollment (Burke et al., 2000), they are often inequitably accessible, depending on an individual's socioeconomic status and background.

In this paper, we review existing AET financing schemes in selected OECD nations, and identify potential AET implementation strategies. Specifically, we explored international data to document AET participation by adults at different literacy skill levels. Then, we discuss examples of financing schemes in four selected countries, including France, Canada, the U.K. and the U.S. These countries were selected based on our preliminary review of the literature and reports on countries that had implemented or attempted to implement financing schemes for adult education.

### **Theoretical Framework**

This study is guided by Cross's (1981) barriers to participation in adult learning activities typology. Cross (1981) identified three categories of constraints to adult learning: 1) *situational barriers* which include the cost of education (including books and other related costs), lack of

transportation, and job and home responsibilities; 2) *institutional barriers* which include difficulty in enrollment, lack of information about programs of study, inflexible course schedule, and time to complete program; and 3) *dispositional barriers* which include age concerns, prior negative experiences with education, and lack of self-confidence. Dispositional barriers are generally the most difficult to address while situational barriers are thought to be less challenging to overcome. Adults with lower levels of skills or education often face multiple barriers to participation, including paying for education (situational barrier) and lack of self-confidence in returning to the classroom (dispositional barrier) (Desjardins & Rubenson, 2013). In recent years, there has been a change in state and federal policy in the U.S. where responsibility for funding adult education is shifting to the individual, which has resulted in some adult students withdrawing from AET (Kasworm, 2020).

In this paper, we report AET participation rates by literacy skill levels and acknowledge similar data have been reported elsewhere (e.g., Desjardins, 2015; Patterson, 2017). Examination of AET participation by literacy skill level is necessary to understand the scope of the problem of participation by low-skilled adults. In addition, we identified potentially effective financing schemes and shortcomings in the existing financing models by reviewing AET data and relevant literature across the four selected OECD nations to address situational barriers. Situational barriers are only a part of AET constraints. However, we argue that situational barriers need to be eliminated first before addressing institutional and dispositional barriers, which require more complex approaches.

### **Methodology**

For this study, we used data from the 2012/2014 Program for the International Assessment of Adult Competencies (PIAAC) for adults ages 25 to 65 to compare participation in adult education and training programs by literacy skill level for the four countries. Of the U.K.

countries examined, only England participated in PIAAC. PIAAC is an ongoing large-scale skills assessment survey organized by the OECD and implemented by each participating country (Rampey et al., 2016). The survey includes an extensive background questionnaire along with an assessment for literacy, numeracy, and problem-solving skills in technology rich environments. The background questionnaire includes basic demographic data along with information regarding the development and maintenance of skills, such as education and participation in various types of AET programs (OECD, 2010). Due to PIAAC data limitations, informal learning activities are not considered. The variable used to analyze AET was FNFAET12, which indicates participation in formal or non-formal AET in the 12 months preceding the survey (National Center for Educational Statistics (NCES), 2016).

PIAAC defines literacy as “understanding, evaluating, using and engaging with written texts to participate in society, to achieve one’s goals, and to develop one’s knowledge and potential” (OECD, 2012, p. 3). Literacy scores (range from 0 to 500) were estimated based on the respondents’ performance on literacy-related tasks. In PIAAC, literacy scores were further classified into six proficiency levels ranging from below level 1 to level 5 (Goodman et al., 2013). We classified those with low skill levels (below level 1 and level 1) and those with medium and high skills (levels 2 – 5) (NCES, 2019). Participation in AET by education level is also relevant, but because educational attainment and literacy skills are closely correlated (OECD, 2016b), we only included a comparison of AET by literacy skill level.

The PIAAC International Data Explorer (IDE) available through the National Center for Education Statistics (2020) was used to compare AET participation among countries included in the study. The IDE is an interactive online application which takes the complex sampling designs

into account to generate inter-/nationally representative, weighted descriptive summaries (e.g., percentages of respondents who participated in AET) of PIAAC data (NCES, 2020).

To compare financing schemes for adult learning, we conducted a review of relevant literature. Given the interest in and importance of gaining a better understanding of financing schemes for adult education, this is a suitable method to inform researchers, educators, and policy makers about financing models, tentative outcomes, reasons for successful implementation, as well as potential for improvement. Literature and reports on financing AET were sought in three steps. First, an initial search of websites (e.g., OECD, European Union, the International Labour Organization, the United Nations Educational, Scientific and Cultural Organization) identified financing structures for AET and countries that implemented or considered implementing financing schemes. Second, we used Google Scholar, ERIC, Psychinfo, and the Web of Science to conduct the literature search. Based on findings from the initial search, we added country names to this search (i.e., United States, U.S., Canada, U.K., United Kingdom, England, France, and Scotland) to focus on the literature and reports in these nations. Articles and other documents identified during these searches were selected and reviewed based on their relevance to this study.

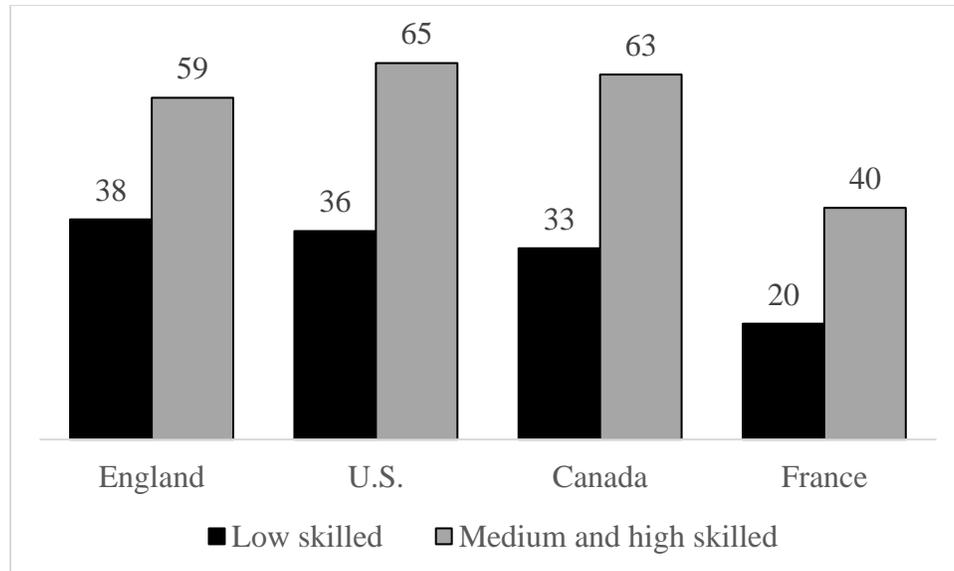
## **Results**

### **PIAAC Data**

There were country-level variations in AET participation by literacy skill levels (see Figure 1). In all countries examined, adults with low-literacy skills were less likely to participate in AET as compared to those with medium and high skills. AET participation rates for the low-skilled ranged from 20% (France) to 38% (England) and for the medium and high skilled ranged from 40% (France) to 65% (U.S.). In the U.S., 36% of low-skilled adults participated in AET.

Figure 1.

*Participation (percentage) in adult education and training within the last 12 months by literacy level, ages 25 - 65*



Notes:

1. PIAAC data are only included for England and do not include the entire economic block of United Kingdom.
2. Low-skilled includes PIAAC respondents who scored below level 1 or at level 1; medium and high-skilled included respondents who scored at levels 2, 3, 4, and 5.

Source: National Center for Education Statistics (2020).

## **Review of Financing Schemes**

Here, we present results from the literature review for adult education financing schemes for the countries included in this study. Countries are grouped by categories identified by the OECD (2019b): (1) individual learning accounts (ILAs; France); (2) individual savings accounts (ISAs; Canada, the U.K. and the U.S.); and (3) training vouchers (Scotland and the U.S.). In some cases, programs were short-lived and are no longer in place, but reasons for their termination can inform future programs. These funding structures may be referred to by different terms in countries where they are offered. A summary of the financing models, including their current status, is included in Table 1.

**Table 1. Summary of Lifelong Learning Funding Models**

Funding Scheme	Source of Funds	Target Population(s)	Funding Levels	Current Status
<b>Individual Learning Accounts</b>				
France	Employer levy equal to 2% of gross wages	Less than 9 years of education and greater than 9 years of education	Less than 9 years of education: \$956 per year or total of \$9,555 over working career; greater than 9 years of education \$597 per year or total of \$5,972 over working career	Currently active. Least skilled participate at lower rates than high-skilled.
<b>Individual Savings Accounts</b>				
Canada – learn\$save, demonstration project	Government matches participant up to \$1,000	Low-income	Dependent on account balances	No longer active due to lack of participation by target population likely caused by matching requirement.
U.K.	Employer and employee	Adults aged 19 and older	Dependent on account balances	No longer active. Widespread provider fraud and poor-quality training resulted in program termination.
U.S. demonstration programs	Employer and employee	Low-income and disadvantaged groups	Dependent on account balances	Never fully implemented. Proposed legislation not enacted.
<b>Training Vouchers</b>				
Scotland	Government	Low-income	\$267 per year for those earning less than \$29,361 per year and \$133 per year for those earning more than that amount.	Active, but low levels of funding for participant training might not provide adequate funding for skill upgrading.
U.S.	Government	Low-income, underemployed, and unemployed workers	Varies depending on available funds, but generally ranges from \$5,000 - \$10,000 depending on type and length of training.	Currently active

Note: Funding levels are shown in U.S. dollars.

### ***Individual Learning Accounts***

#### **France.**

France's ILAs, which were initially created in 2015, are funded through a mandatory levy on employers equal to 2% of gross wages. Initially, training rights were measured in hours of training but since early 2019 are measured monetarily (i.e., in Euros) and can be accumulated over time (OECD, 2019b). Individuals with less than a lower secondary education (i.e., less than 9 years) are eligible to accumulate up to EUR 800 (\$956 US<sup>1</sup>) (TransferWise, 2020) per year or a total of EUR 8,000 (\$9,555 US) over their working career. Adults with more than a lower secondary degree can accumulate up to EUR 500 (\$597 US) per year or a total of EUR 5,000 (\$5,972 US) over their working career (OECD, 2019b). Employers or employees can add to the training account if accumulated funds are insufficient for the desired training program. To be eligible for this program, courses must be included in an official list and generally focus on vocational studies (Eurofound, 2020). Unfortunately, the least skilled in France have not utilized this program to the same extent as those with higher skill levels (OECD, 2019b).

### ***Individual Savings Accounts***

#### **Canada.**

Co-financed ISAs were proposed in the early 2000s. Due to concerns that an ISA program might overlap too closely with existing policies, a structure aimed more specifically at low-income and underserved individuals was proposed (Schuetze, 2007; Schuetze, 2009). Modeled after anti-poverty measures more than a true ISA, the program, called learn\$ave, created individual savings accounts to allow individuals to save for their own education (Leckie et al., 2008; Schuetze, 2007; Schuetze, 2009).

---

<sup>1</sup> All currency conversions are as of November 30, 2020.

The learn\$ave program, as implemented, offered government matched savings to participants, though participants needed to advance funds to participate in educational programs to gain access to program funds, including the money they personally invested (Leckie et al., 2010). The learn\$ave pilot program targeted low-income individuals but only 3% of that group participated (Leckie et al., 2010), which likely resulted due to co-financing requirements. Other barriers, such as dispositional barriers (e.g., lack of self-confidence), may have been a factor in low participation rates by low-income adults (OECD, 2019b). Reflective of outcomes seen in the United Kingdom (discussed later), early evaluation of the learn\$ave program showed that participants who received the most benefit from the program were likely those who entered the program with higher levels of education, as well as those who had previously been saving more money in general (Leckie et al., 2008). The learn\$ave program is no longer active, possibly due to low-participation by the target group and due to co-financing requirements. In addition, administrative burdens in program operation limited its cost effectiveness (OECD, 2019b).

### **The United Kingdom.**

Individual savings accounts began limited operation across the United Kingdom in 2000 and with slight variations across each nation within the economic block (Johnson et al., 2010; OECD, 2004). These programs were available to all adults over the age of 19, provided they were not currently engaged in some type of higher education or vocational training (OECD, 2004). Accounts were structured such that both employees and their employers could add funds to an employee's ISA, with the learner determining how best to use these funds to maintain their overall employability, not specifically related to their current position (Gautié & Perez, 2012). Widespread provider fraud, such as aggressive and misleading marketing practices, and poor-quality training led the government to close the program in 2001 (OECD, 2004; OECD, 2019b;

Schuetz, 2007). Mechanisms to ensure training providers are qualified, such as demonstrating financial stability and at least two years of successful activity, were required in a program subsequently implemented as a voucher system in Scotland (OECD, 2019b) which will be discussed in a following section.

### **United States.**

Recognizing the need for continuous skill upgrading, in 2000 ISAs were piloted by the federal government. The pilot project provided for a shared funding model between the agency and the employee. While agencies participating in the pilot project considered ISAs to be an important tool for recruitment and retention (President's Task Force on Federal Training Technology, 2001), most agencies do not offer ISAs as described in the pilot project (Office of Personnel Management, n.d.). Following the federal ISA pilot project, there have been proposals and attempts to implement individual savings accounts that allow account holders to save pre-tax funds for their education. Similar, to the learn\$ave system, ISAs in the U.S. were originally proposed to offer access to continuing educational opportunities to low-income and disadvantaged individuals through a separate savings account (Fitzpayne & Pollack, 2018). These accounts may also allow for employer matching of funds deposited by the learner (CAEL, 2007). In 2008, the Council for Adult and Experiential Learning (CAEL) completed a 5-year, three-site ISA demonstration project in Chicago, Northeast Indiana, and San Francisco. Over half of program participants completed at least one course. Moreover, completers experienced wage gains (CAEL, 2007, 2011). Additional demonstrations implemented in Maine, Washington, and New York City produced similar results (CAEL, 2011; Fitzpayne & Pollack, 2018). Recognizing the need for a skilled workforce, Fitzpayne and Pollack (2018) proposed a national ISA model that would allow workers earning less than \$50,000 per year to make contributions on a pre-tax

basis. This proposal, which was part of the Aspen Institute's Future of Work Initiative, proposed that employers and the government would provide matching funds that would vary by the individual's income (Fitzpayne & Pollack, 2018). Over the past decade, there have been multiple efforts to implement federal legislation for ISAs, including the Lifelong Learning and Training Account Act of 2019 (CAEL, 2011; Lifelong Learning and Training Account Act, 2019). Although there have been initiatives aimed at encouraging the adoption of ISAs nationally as part of standard worker compensation packages (CAEL, 2007, 2011; Fitzpayne and Pollack, 2018), there is no national standard or expectation of access to ISAs within the United States.

### ***Training Vouchers***

#### **Scotland.**

In 2004, Scotland implemented a voucher system for training, which followed the termination of its ISA program. As initially implemented, the program provided £200 (\$267 US) per year for individuals earning less than £18,000 (\$24,023 US) per year. In 2005, the program was expanded to provide £100 (\$133 U.S.) per year for training regardless of income (The Scottish Government, 2008). Learners are required to make a £10 (\$13.35 US) annual contribution, which can be a burden for low-income adults. Earnings eligibility has since been increased and is currently £22,000 (\$29,361 US) per year for the larger (£200 per year) training voucher. There are limitations on the number of available awards and if the training cost exceeds £200, additional training costs are the responsibility of the participant (My World of Work, 2020), which, for some, limits training options. Low levels of funding may be inadequate for some individuals to fund necessary reskilling (Rutherford, 2007).

#### **United States.**

The U.S. implemented a voucher system for training as part of the 1998 Workforce Investment Act and its successor, the 2014 Workforce Innovation and Opportunity Act (WIOA).

Individual training accounts were established as vouchers to be exchanged for education (Ebert, 2019). WIOA provides training funds through two adult programs, the Adult Program, which is for low-income workers, and the Dislocated Worker Program. State level funding for both programs is based on a formula that considers the total number of unemployed and disadvantaged adults in the state (U.S. Department of Labor, Employment and Training Administration, 2020). The amount funded through a voucher depends on the availability of funds and generally ranges from \$5,000 to \$10,000, but the amount may vary by state, Workforce Development Board (WDB), and program of study. WDBs are responsible for payments to providers for training such that participants are not required to advance the funds. While co-funding by the participant is not required, if the cost of the selected program exceeds the limit imposed by the WDB, the participant is permitted to provide supplemental funding (Ebert, 2019). The employment crisis created by COVID-19 enabled states and eligible applicants (e.g., U.S. territories) to request funding through Disaster Recovery Dislocated Worker Grants (DWGs). Thus far, over \$250 million in DWGs have been awarded (U.S. Department of Labor, 2020).

WIOA provides for a one-stop delivery system for its programs with about 2,500 job centers located throughout the U.S. State WDBs are responsible for developing state-level strategic plans while local WDBs are responsible for developing regional and local plans, approving training providers, and overseeing job center programs (Counts, 2017). While program participants are required to consult with job center staff about training options, the participant makes the final decision in their program of study, which is known as an informed choice model (Ebert, 2019).

## Discussion and Implications

Despite increasing needs for AET, our analysis of the international data and literature review revealed that AET participation is significantly lower among less educated, low-skilled, and low-income adults compared to their counterparts. Low AET participation rates are likely due to the combination of institutional, situational, and dispositional barriers (Cross, 1981). To better facilitate participation in AET, financing models that are easy to navigate and are sustainable to provide adequate funds for skill upgrading, are necessary to address situational and institutional barriers. Dispositional barriers, which include prior negative experiences with education and lack of self-confidence are more difficult to address, but overcoming other barriers (e.g., cost of AET) are important first steps to encourage participation by low-skilled adults. To facilitate positive outcomes by low-skilled adults, Holzer (2021) argues that student supports, such as academic and career counseling, tutoring, child-care, and transportation, are necessary to increase participation by disadvantaged students (Holzer, 2021). Funding available through the recent Higher Education Act, combined with funds available from the American Rescue Plan Act of 2021, will provide community colleges, which are important sources of training for disadvantaged workers, with resources to implement programs necessary to improve student success (American Council on Education, 2021; Holzer, 2021).

While the three models for financing AET have been implemented in various forms in the four countries we reviewed, either through government-sponsored programs or private demonstration programs, wide implementation has not yet occurred. Examination of reasons for program termination or low participation rates by target populations are important to understand when considering new financing schemes. For example, problems in the U.K. related to provider fraud and low-quality training resulted in the government ending the program within the first

year. Screening providers for marketing strategies, financial stability, and the quality of their AET programs is important to program success. ISA programs in Canada were not fully implemented, primarily because of a structure that would not attract their target population --- low-income adults. Adults with higher levels of income, education, and skills can typically fund their own training, or training is provided by their employer. Programs that require matching funds from participants may deter participation by low-income adults and do not resolve situational barriers. Other problems that may have caused low participation rates include institutional barriers, such as burdensome administrative requirements (e.g., complex or confusing processes to document eligibility) and websites that are difficult to navigate (OECD, 2019b).

Government sponsored voucher programs are especially beneficial for low-income and unemployed adults who do not have financial resources to self-fund their AET. Voucher programs in the U.S. and Scotland have experienced some success but limited funding sources in Scotland most likely result in a short-term AET participation that may be insufficient for significant reskilling. Moreover, overall funding for government-sponsored voucher programs is subject to inconsistent levels of funding. Funding levels for AET should be consistent and adequate to cover reskilling costs so individual employability and workforce productivity can be improved.

Multiple models to fund AET in the U.S. may be necessary to reach individuals at different skill and income levels. For example, the government may implement multiple funding strategies such as tax-funded individual learning accounts and training vouchers for less educated, low-skilled and low-income adults because self-funding and employer-sponsored AET may not be an option. At the same time, highly educated, higher-skilled, and higher income

individuals might benefit from a savings account model that is portable and funded by the individual, the employer, and the government. To maximize AET participation, the financing models should address situational and institutional barriers by creating accessible programs with easily navigable user-friendly websites. In addition, it is important to provide adequate funding for skill upgrading. To promote AET participation, ensuring that training providers are financially stable and well-qualified is another important aspect for successful AET financing programs.

### **Conclusion**

Funding strategies for learning over the entire life course have become increasingly important in recent years and became even more crucial in the past year. Low-skilled workers in the U.S. and elsewhere have experienced job losses due to the COVID-19 pandemic and some will need to be trained in new occupations to become re-employed. During periods of economic downturn, it is important for the U.S. government to be proactive in providing funds for these services and for additional training, as was done with DWGs. Implementation of ISA models, such as those included in the Lifelong Learning and Training Account Act of 2019 and proposed by Fitzpayne and Pollack (2018), should be encouraged. The combination of publicly sponsored AET funding through training vouchers for disadvantaged adults combined with access to an ISA for adults who do not qualify for WIOA programs could increase overall AET participation.

### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work supported by the Institute of Education Sciences R305A170183.

**ORCID iD**

Phyllis A. Cummins <https://orcid.org/0000-0003-3838-9245>

## References

- American Council for Education. (2021). *American Rescue Plan of 2021: Simulated distribution of higher education emergency relief funds*. <https://www.acenet.edu/Policy-Advocacy/Pages/HEA-ED/ARP-Higher-Education-Relief-Fund.aspx>
- Burke, G., Long, M., & Wurzburg, G. (2000). *Lifelong learning as an affordable investment: Financing learning in tertiary education*. Retrieved December 8, 2020 from <http://www.oecd.org/edu/skills-beyond-school/1917560.pdf>
- Campbell, D. E. (2006). *What is education's impact on civic and social engagement*. Measuring the effects of education on health and civic engagement: Proceedings of the Copenhagen symposium. <http://www.oecd.org/education/innovation-education/37425694.pdf>.
- Council for Adult and Experiential Learning (CAEL). (2007). *Changing lives through lifelong learning accounts*. <https://files.eric.ed.gov/fulltext/ED509909.pdf>
- CAEL. (2011). *Lifelong learning accounts: Helping to build a more competitive workforce*. [https://cdn2.hubspot.net/hubfs/617695/2011\\_LiLA%20Policy\\_Overview.pdf](https://cdn2.hubspot.net/hubfs/617695/2011_LiLA%20Policy_Overview.pdf).
- Commission of the European Communities. (2000). *Memorandum on lifelong learning*. Retrieved from <https://uil.unesco.org/i/doc/lifelong-learning/policies/european-communities-a-memorandum-on-lifelong-learning.pdf>
- Counts, D. (2017). *WIOA 101: A bird's-eye view of the state implementation of the Workforce Innovation and Opportunity Act*. Council of State Governments. <https://knowledgecenter.csg.org/kc/content/wioa-101-birds-eye-view-state-implementation-workforce-innovation-and-opportunity-act>
- Cross, P. (1981). *Adults as learners*. Jossey-Bass.

- Dauth, C. (2020). Regional discontinuities and the effectiveness of further training subsidies for low-skilled employees. *ILR Review*, 73(5), 1147-1184.
- Desjardins, R. (2015). *Participation in adult education opportunities: Evidence from PIAAC and policy trends in selected countries*. (ED/EFA/MRT/2015/PI/02). UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0023/002323/232396e.pdf>
- Desjardins, R., & Rubenson, K. (2013). Participation patterns in adult education: The role of institutions and public policy frameworks in resolving coordination problems. *European Journal of Education*, 48(2), 262-280.
- Eberts, R. W. (2019). *Individual training accounts and nonstandard work arrangements* (Upjohn Institute Technical Report No. 19-037).  
[https://research.upjohn.org/up\\_technicalreports/37/](https://research.upjohn.org/up_technicalreports/37/)
- Eurofound. (2020). *France: Employers obligation to provide skill development plans or training*.  
<https://www.eurofound.europa.eu/observatories/emcc/erm/legislation/france-employers-obligation-to-provide-skill-development-plans-or-training>
- Fitzpayne, A., & Pollack, E. (2018). *Lifelong learning and training accounts*. Aspen Institute.  
<https://www.aspeninstitute.org/publications/lifelong-learning-and-training-accounts-2018/>
- Gautié, J., & Perez, C. (2012). *Promoting lifeong learning through individual accounts: From asset-based to capability-based policies*. <https://hal.archives-ouvertes.fr/halshs-00706675/>

- Goodman, M., Finnegan, R., Mohadjer, L., Krenzke, T., & Hogan, J. (2013). *Literacy, numeracy, and problem solving in technology-rich environments among U.S. adults: Results from the Program for the International Assessment of Adult Competencies 2012. First look.* <https://nces.ed.gov/pubs2014/2014008.pdf>
- Holzer, H. J. (2021). *After COVID-19: Building a More Coherent and Effective Workforce Development System in the United States.* Brookings Institution.  
<https://www.brookings.edu/research/after-covid-19-building-a-more-coherent-and-effective-workforce-development-system-in-the-united-states/>
- Hyde, M., & Phillipson, C. (2014). *How can lifelong learning, including continuous training within the labour market, be enabled and who will pay for this? Looking forward to 2025 and 2040 how might this evolve?* Government Office for Science.  
<http://dera.ioe.ac.uk/23660/1/gs-15-9-future-ageing-lifelong-learning-er02.pdf>.
- International Labour Organization. (2018). *Financing life-long learning for the future of work.* [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms\\_646046.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_646046.pdf)
- Johnson, S., Holt, R., Khan, N., Morin, M., & Sawicki, S. (2010). *Personal learning accounts: Building on lessons learnt.* UK Commission for Employment and Skills. Retrieved November 13, 2020 from <http://dera.ioe.ac.uk/id/eprint/1307>
- Kasworm, C. (2020). *Adult workers as learners in the USA: Higher education landscape.* In M. Slowey, H. G. Schuetze, & T. Zubrzycki (Eds.), *Inequality, Innovation and Reform in Higher Education* (pp. 221-235). Springer.
- Keese, M. (2006). *Live longer, work longer.* OECD Publishing.

- Leckie, N., Dowie, M., & Gyorfi-Dyke, C. (2008). *Learning to save, saving to learn: Early impacts of the learn\$ave individual development accounts project*. Social Research and Demonstration Corporation. <https://community-wealth.org/content/learning-save-saving-learn-early-impacts-learnave-individual-development-accounts-project>
- Leckie, N., Hui, T. S. W., Tattrie, D., Robson, J., & Voyer, J. (2010). *Learning to save, saving to learn: Final report of the learn\$ave individual development accounts project*. Social Research and Demonstration Corporation.  
[http://www.srdc.org/uploads/learnSave\\_final\\_EN.pdf](http://www.srdc.org/uploads/learnSave_final_EN.pdf)
- Lifelong Learning and Training Account Act*, S.539, 116 Cong. (proposed, 2019).  
<https://www.congress.gov/bill/116th-congress/senate-bill/539?q=%7B%22search%22%3A%22lifelong+learning+and+training+account+act%22%7D&s=2&r=1>
- My World of Work. (2020). *Skills Development Scotland individual training accounts (ITA)*. Retrieved November 30, 2020 from <https://www.myworldofwork.co.uk/learn-and-train/sds-individual-training-accounts-ita>
- National Center for Education Statistics. (NCES; 2016). *PIAAC U.S. household public use file codebook*. U.S. Department of Education.  
<http://www.oecd.org/skills/piaac/publicdataandanalysis/>
- NCES. (2019). *Adult literacy in the United States*. <https://nces.ed.gov/pubs2019/2019179.pdf>
- NCES. (2020). *International data explorer*  
<https://nces.ed.gov/surveys/piaac/ideuspiaac/dataset.aspx>
- Organisation for Economic Cooperation and Development. (OECD, 2004). *Co-financing lifelong learning: Towards a systemic approach*. OECD Publishing

- OECD. (2010). *PIAAC background questionnaire* (MS version 2.1 d.d. 15-12-2010). OECD Publishing.  
<http://www.oecd.org/site/piaac/Background%20Questionnaire%2015DEC10.pdf>
- OECD. (2012). *Literacy, numeracy and problem solving in technology-rich environments: Framework for the OECD survey of adult skills*. OECD Publishing.  
<http://dx.doi.org/10.1787/9789264128859-en>
- OECD. (2016a). *Enhancing employability: Report prepared for the G20 employment working group*. OECD Publishing. <https://www.oecd.org/employment/emp/Enhancing-Employability-G20-Report-2016.pdf>
- OECD. (2016b). *The survey of adult skills: Reader's companion* (2<sup>nd</sup> ed.). OECD Publishing.  
[https://www.oecd.org/skills/piaac/Skills%20\(vol%202\)-Reader%20companion--v7%20eBook%20\(Press%20quality\)-29%20oct%200213.pdf](https://www.oecd.org/skills/piaac/Skills%20(vol%202)-Reader%20companion--v7%20eBook%20(Press%20quality)-29%20oct%200213.pdf)
- OECD. (2019a). *Getting skills right: Engaging low-skilled adults in learning*. OECD Publishing.  
[www.oecd.org/employment/emp/engaging-low-skilled-adults-2019.pdf](http://www.oecd.org/employment/emp/engaging-low-skilled-adults-2019.pdf)
- OECD. (2019b). *Individual learning accounts: Panacea or pandora's Box?* OECD Publishing,  
<https://doi.org/10.1787/203b21a8-en>.
- Office of Personnel Management. (n.d.). *Training and development policy: Individual learning accounts*. Retrieved March 1, 2021 from <https://www.opm.gov/wiki/training/Individual-Learning-Accounts-ILA.ashx>
- Patterson, M. B. (2017). The Forgotten 90%: Adult Nonparticipation in Education. *Adult Education Quarterly*, 68(1), 41-62. <https://doi.org/10.1177/0741713617731810>
- Pew Research Center. (2016). *Lifelong learning and technology*. Pew Research Center.  
<https://www.pewresearch.org/internet/2016/03/22/lifelong-learning-and-technology/>

- President's Task Force on Federal Training Technology. (2001). *Individual learning account pilot initiative: A learning tool for the 21st Century*. Office of Personnel Management. <http://files.eric.ed.gov/fulltext/ED457400.pdf>
- Rampey, B. D., Finnegan, R., Goodman, M., Mohadjer, L., Krenzke, T., Hogan, J., & Provasnik, S. (2016). *Skills of US unemployed, young, and older adults in sharper focus: Results from the Program for the International Assessment of Adult Competencies (PIAAC) 2012/2014: First look*. (NCES 2016-039). NCES. Retrieved from <https://nces.ed.gov/pubs2016/2016039rev.pdf>
- Rutherford, H. (2007). ILA Scotland: Practical case study of demand-led funding for adult learning. *Individual Learning Accounts* (pp. 44-47). Cedefop European Centre for the Development of Vocational Training. [https://www.cedefop.europa.eu/files/5192\\_en.pdf](https://www.cedefop.europa.eu/files/5192_en.pdf)
- Schuetze, H. G. (2007). Individual Learning Accounts and other models of financing lifelong learning. *International Journal of Lifelong Education*, 26(1), 5-23.
- Schuetze, H. G. (2009). ILAs in Canada: Research and demonstration. *Individual Learning Accounts* (pp. 95-101). Cedefop European Centre for the Development of Vocational Training. [https://www.cedefop.europa.eu/files/5192\\_en.pdf](https://www.cedefop.europa.eu/files/5192_en.pdf)
- The Scottish Government. (2008). *Individual Learning Accounts (ILA) Scotland-summary of available data* (0755970748). <http://hdl.voced.edu.au/10707/156305>
- TransferWise. (2020). Currency converter. TransferWise. <https://transferwise.com/us/currency-converter/eurto-usd-rate?amount=100>
- United Nations Educational Scientific and Cultural Organization (UNESCO). (2015). *Recommendations on adult learning and education*. <https://unesdoc.unesco.org/ark:/48223/pf0000245179>

U.S. Department of Labor. (2020). *COVID-19 Dislocated Worker Grants*.

<https://www.dol.gov/agencies/eta/dislocated-workers/grants/covid-19>

U.S. Department of Labor, Employment and Training Administration. (2020). *Workforce*

*Innovation and Opportunity Act (WIOA) and Wagner-Peyser Act statutory formulas for state allotments*. <https://www.dol.gov/agencies/eta/budget/formula/state>