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Adult Literacy Education:

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The journal's mission is to publish research on adult basic and secondary education and

transitions to college and career programs. It informs practitioners, researchers, policy

makers, and funders about best practices in adult literacy, numeracy, and English language

education in publicly funded, community and volunteer-based programs in a wide range of contexts. Each issue will consist of research articles focused on a particular theme plus

other content of interest to readers (e.g., resource reviews, opinion pieces, and debates

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Research Article

U.S. Adults in Foundational Education: Backgrounds and Skills of Learners with Low Numeracy Skills

Margaret Becker Patterson, Research Allies for Lifelong Learning

Abstract

Adults with low numeracy skills often start adult foundational education services or work with individual tutors. Using U.S. PIAAC 2012/2014/2017 data, this paper examines the characteristics, educational backgrounds, and numeracy proficiency of adult learners in adult foundational education, along with use of numeracy skills at home and how skills predict use. Despite challenges in employment, incomplete education, and a learning disabilities rate of nearly 15%, adult foundational education learners have an interest in learning strategies and computer experience and include a high percentage of English learners. Adult foundational education learner numeracy scores generally fall at Level 1, but positive links occur between numeracy skills and use, particularly in calculations and financial transactions. The paper offers resources for instructors to enhance learner numeracy.

Keywords: adult learners, numeracy, foundational education, practice engagement, PIAAC

Attention to numeracy has increased recently around the globe as society becomes number drenched (Prendergrast et al., 2023). Adult numeracy is of vital interest to societies and economies worldwide yet is also underresearched (Gal et al., 2020). Low adult numeracy is believed to be associated with unemployment and the need for social assistance (Oughton, 2018). As U.S. society increasingly relies on quantitative information (Cummins et al., 2018), investigating how numeracy skills—practices in everyday life involving mathematics activities (Hogan et al., 2016)— of learners in adult foundational education ("AFE learners") compare is important (Patterson, 2023).

Beyond economic and societal considerations, numeracy scholars argue for a view encompassing adults' numeracy practices and potential vulnerabilities, and their beliefs, attitudes, and personal goals. These goals may include learning numeracy skills toward a high school equivalency (HSE) credential, making family life easier, or even learning simply for fun (Oughton, 2018). To navigate daily life, help their children with schoolwork, and understand their changing health with age, adults need numeracy skills (Coben & Alkema, 2017; Ginsburg, 2017; Yamashita et al., 2018). Without these skills, adults may be vulnerable (Gal et al., 2020). Vulnerability with respect to adult numeracy may result from personal, societal, and systemic sources. Gal and colleagues (2020) ask a compelling question: what are the numeracy practices of vulnerable groups and how should such practices be considered when planning and implementing instruction? One vulnerable group is AFE learners with low numeracy skills.

Many U.S. adults have yet to gain numeracy skills. In the U.S. Programme for the International Assessment of Adult Competencies (PIAAC), scores average 257 (Level 2 in numeracy skills; Patterson, 2023). Nearly one in three U.S. adults has low assessed PIAAC numeracy skills, a rate of low skills exceeding that of other countries participating in PIAAC (Organization for Economic Cooperation and Development [OECD], 2016; Oughton, 2018). In almost all countries, a sizeable proportion of adults (22.7% on average) have poor numeracy skills (Level 1 or below; Tout et al., 2017). Having low numeracy skills is a particular challenge for young U.S.-born adults (Sands et al., 2018) or for immigrants learning English (Patterson, 2020; Saal et al., 2018). Sands and colleagues (2018) found that unemployed millennials not enrolled in education were at or below Level 1 in numeracy skills at nearly twice the rate (47%) as millennials overall (25%). Aggregate English learner (EL) findings include a mean PIAAC numeracy score of 208, much lower than the population average of 257 (Saal et al., 2018).

Adults with low numeracy skills may seek AFE services or individual tutors to gain needed skills, and recent trends indicate half of adults with the lowest numeracy skills gain these skills through programs. Evidence suggests, however, that less than 10% of eligible U.S. adults do so (Patterson, 2018), and even that small rate of participation is dwindling (Pickard, 2022). As fewer U.S. adults seek federally and state funded AFE services (Pickard, 2022), the 2020-2022 global pandemic has further challenged accessing services, and these shifts disproportionately affect AFE learners at the lowest skill levels (Belzer et al., 2020, 2022).

This paper posits that low numeracy is associated with unemployment, low income, low education attainment, disability/health factors, and low skill use. Employing the restricted-use 2012/2014/2017 PIAAC dataset, to understand AFE learners with low numeracy skills more deeply, this paper investigates the characteristics, education backgrounds, and numeracy skills of adults participating in basic skills, HSE, and English learning (EL) opportunities. AFE learners are an important subgroup of vulnerable adults. Post-pandemic evidence shows fewer adults seek AFE services, particularly at the lowest levels. By reviewing what we know about AFE learners with low numeracy and how they use numeracy skills, we can seek solutions to engage more adults in AFE. This paper examines how AFE learners use basic numeracy at home and predictive relationships between skills and skill use.

Literature Review

Adult Background Characteristics

Background characteristics of AFE learners with low numeracy skills include education attainment and income. These adults tend to leave high school early and to have substantial rates (22%) of not being in employment or education (Patterson, 2019). Although many adults with low numeracy skills report wanting more education (Bergson-Shillcock, 2017), a sizable proportion does not do so; one-fourth of U.S. adults with numeracy skills at or below Level 1 (28%) agreed they wanted to pursue training, the highest rate in PIAAC countries (Grotlüschen, 2018). Low numeracy skills were also associated with lower income among immigrants and native U.S. citizens (Batalova & Fix, 2015; Jonas, 2018; Patterson, 2019).

Numeracy Skills and Skill Use

Highly relevant to numeracy skills is the use of skills. Skills continue to develop across the lifespan, with gains and losses occurring. Factors predicting gains or losses in learning include sociodemographic characteristics measuring resourcefulness or social advantage, basic cognitive skills, and engagement in literacy and numeracy practices (Lechner, 2023). Practice engagement theory suggests that more use of numeracy skills predicts higher skill levels (Lechner, 2023; Reder et al., 2020). U.S. adult use of numeracy skills at home tends to increase as skill levels rise (Grotlüschen et al., 2016), and numeracy proficiency tends to benefit numeracy practices (Jonas, 2018). Conversely, authors of a recent latent class analysis reported that light numeracy users were less likely to use most numeracy skills at home than were other classes of numeracy use (Yamashita et al., 2022).

Type of numeracy used may vary for subpopulations, especially among adults considered vulnerable. For example, a German paper reported results on high use of calculating costs and budgets among vulnerable subgroups, including unemployed adults, homeless adults, and adults with high debt (Grotlüschen et al., 2019). Also, a recent U.S. study of numeracy skills and skills use of adult ELs (Patterson, 2020) found that ELs tended to use financial numeracy skills most often, including reviewing financial statements, conducting online transactions, and calculating costs or budgets. The majority reported using basic math less than monthly. Use of numeracy skills at home, on top of factors of EL education, health, and parental education, accounted for 40% of the variance in numeracy skills, with use of financial numeracy the strongest predictor (Patterson, 2020).

Numeracy skills and use may also predict health outcomes

and behaviors (Jonas, 2018). Having strong numeracy skills may support adults to understand health risks, make informed health decisions, and manage health conditions (Feinberg et al., 2016; Jonas, 2018; Prins & Monnat, 2015). For example, compared with individuals having low numeracy skills, those with moderate to high numeracy skills were 156% more likely to have dental checkups (Yamashita et al., 2018). Oughton noted that the odds of fair or poor health quadrupled for adults with low numeracy skills and their children were more likely to have low skills (2018).

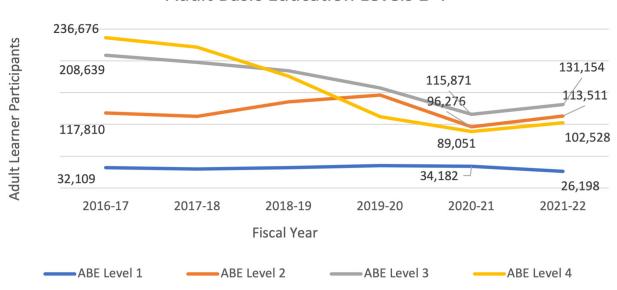
Challenges of Accessing Numeracy Learning for Adults with Low Skills

To gain numeracy skills and associated benefits, adults frequently seek out AFE services offered through federally funded Workforce Innovation and Opportunity Act (WIOA) programs or work with individual tutors, who are typically volunteers. ProLiteracy reported that its 5,000 U.S. community-based organizations, staffed primarily by volunteers, served more than 148,000 adult learners across 2.2 million volunteer hours (ProLiteracy, 2023). Accessing services to gain numeracy skills, however, is not always straightforward, particularly for AFE learners with the lowest skill levels. A 66% reduction in adult basic education (ABE) enrollment and 49% decrease in EL enrollment in

FIGURE 1: U.S. Adult Learner Enrollment Trends

WIOA programs occurred through 2020 (Pickard, 2022). Pickard understandably asked why fewer people enrolled; the answers are complex and involve changes in federal policy and accountability, stagnant federal funding, a shift in focus from HSE to workforce preparation, changes in learner interests, and very recent shifts to online learning. Pickard (2022) encouraged researchers to investigate factors related to declining enrollment.

Pickard's research did not address, however, whether differences occurred in enrollment or outcomes for the lowest levels of ABE learners and ELs since the pandemic. Pandemic restrictions from 2020 to 2022 added to learners' challenges, and especially caregiving women's, in accessing AFE; new challenges included adults' unemployment, food insecurity, illness, and supporting children's remote learning (Belzer et al., 2022). In spring 2020, an estimated 97% of AFE programs switched abruptly to remote instruction (Belzer et al., 2022). According to an AFE staff scan (Belzer et al., 2020), learners with low skills were most negatively impacted by transitioning online. AFE learners with low skills often "required additional help" to use online tools so "were less likely to continue" (Belzer et al., 2020, p. 9). Learner technology challenges were low digital literacy skills, limited (and costly) broadband access, and lack of devices.



Adult Basic Education Levels 1-4

Source: National Reporting System Data, 2016-17 through 2021-22

An AFE program administrator remarked in 2021 that adults with "'lower level of literacy or technology are the ones suffering the most. They're not being served" (Belzer et al., 2022, p. 8). These findings reinforce the need to know more about family situations and familiarity with technology of AFE learners with low numeracy skills.

In the context of pandemic shifts and WIOA, most ABE and EL levels in National Reporting System (NRS) data (https://nrs.ed.gov/) tended to experience enrollment loss from 2016-17 to 2020-21 (the first WIOA implementation year and the first full year of pandemic restrictions, respectively; see Figure 1). For example, from 2020-21 to 2021-22, the latest year available at time of writing, ABE Levels 2, 3, and 4 showed signs of rebounding, increasing 18%, 13%, and 15%, respectively, although not to prepandemic levels. An exception to this trend was ABE Level 1. In Figure 1, ABE Level 1 enrollment, the lowest level tracked in NRS, remained flat nationally between 2016-17 and 2020-21, with a 6% increase. Figure 1 shows that in 2021-22, ABE Level 1 enrollment decreased 23% compared with 2020-21 instead of rebounding like Levels 2 through 4. While it is uncertain how trends will continue, loss of AFE learners enrolling at the lowest level of ABE is discouraging, especially since adults at low levels have the strongest needs for numeracy.

For thousands who do enroll, gaining numeracy skills in AFE is critical. From 2018-19 through 2021-22, NRS collected data on percentages of adults achieving level gains in Mathematics (for example, moving from ABE Level 1 to 2, or higher) as measured by pre- and posttests. Except during pandemic restrictions in 2020 and 2021, approximately half of ABE Level 1 learners gained numeracy skills. In 2018-19 and 2019-20, just under half of ABE Level 1 learners made Mathematics gains (46% and 43%, respectively). The 2020-21 percentage dropped to 25%, but by 2021-22 doubled to 53%. Where AFE learners could find ways past the challenges detailed earlier to enroll and stay in the AFE program, their chances of gaining numeracy skills appeared good.

Research Questions

Knowing more about AFE learners with low numeracy skills, including their characteristics, backgrounds, skill levels, and use of skills, is critical. To contribute to a deeper understanding of AFE learners with low numeracy skills, this paper, employing the PIAAC 2012/2014/207 dataset, addresses the following research questions:

- What are the demographic characteristics of AFE learners – those participating in basic skills, HSE, and EL instruction (i.e., age, gender, race/ethnicity, partner and family status, health status, region of USA, income, native/immigrant status, English speaking ability, and length of residence in USA)?
- 2. What is the educational background and experience of AFE learners (i.e., education attainment, main reason for taking classes/tutoring, parental education, learning disabilities status, experience with computers in everyday life, six learning strategies, any uncompleted education, wanted education but did not start, and reason for not starting education)?
- 3. What are numeracy skill levels of AFE learners?
- 4. To what extent do AFE learners use numeracy skills overall and four basic numeracy skills at home (i.e., calculating costs, calculating fractions/percentages, using a calculator, and conducting financial transactions), and how do numeracy skills, with and without covariates, predict that use?

Methods

Sample

PIAAC is an international, multi-cycle survey of adult skills and competencies carried out by the OECD (Krenzke et al., 2020) in over 35 countries. The first cycle of PIAAC included three waves: 24 countries in 2011-12 (wave 1); nine additional countries in 2014-15 (wave 2); and five additional countries in 2017-18 (wave 3). In the United States, PIAAC surveyed individuals ages 16 – 74 years. Participating adult completed a background questionnaire (BQ) and took three assessments in domains of cognitive skill: literacy, numeracy, and problem solving in technology-rich environments. To provide a measure of uncertainty in cognitive skills, PIAAC used 10 plausible values (multiple imputations) based on IRT scaling of cognitive items with a latent regression model using BQ information. A set of weights for the combined PIAAC 2012/2014/2017 sample was created by combining the final PIAAC 2012/2014 and PIAAC 2017 weights and calibrating to population totals (Krenzke et al., 2020).

PIAAC numeracy levels are based on numeracy scores and range from below Level 1 to Level 5: below Level 1 (0-175), Level 1 (176-225), Level 2 (226-275), Level 3 (276-325), and Levels 4 / 5 (326-500), according to the PIAAC Technical Manual (Hogan et al., 2016). Level 1 numeracy tasks require the adult to carry out basic mathematical processes in common, concrete contexts. Tasks usually require simple one-step or two-step processes involving, for example, performing basic arithmetic operations; understanding simple percentages; or identifying and using elements of simple or common graphical or spatial representations (OECD, 2013). The PIAAC numeracy assessment contained 57 test items.

The PIAAC-USA restricted-use dataset from 2012/2014/2017 used for this paper contained a sample of 12,330 U.S. adults. While sample and replicate weights were available in the public-use files for 2012, 2014, or for 2017 separately, pooled data with combined weights were only available as restricted-use data (Krenzke et al., 2020). The chief advantage of restricted-use data is maximizing the number of AFE learners - a small PIAAC subgroup. To exclude young adults still in compulsory education, the sample was limited to 350 AFE learners who were at least 18 years old. The sample was selected from positive responses to three PIAAC questions about taking courses or tutoring, including 90 taking basic skills classes or tutoring, 150 in HSE preparation, and 110 English learners. This sample represents an estimated 5.2 million AFE learners.

Variables and Analyses

More than 40 variables were selected to describe the characteristics and educational backgrounds of AFE learners. Variables were analyzed using SPSS 26 and IDB Analyzer, a package incorporating PIAAC sample and replicate weights as well as plausible values for skills. Percentages, with standard errors (*SE*), were calculated to estimate AFE learner status and performance. Variables addressed learner type and reasons for taking classes/ tutoring, age, gender, ethnicity, and U.S. geographic region (NCES, 2019). Employment variables were employment status, including unemployment, monthly salary, and hourly wage. Education background variables included highest education level, uncompleted education, training not started and reasons for not starting, six learning strategies, parental education, and experience with computers.

Family-related variables measured partner status and information about children. Immigrant information included birth and language status and English-speaking ability. Health-related variables were health status, difficulty seeing print, and diagnosed learning disabilities.

Numeracy skills were measured employing 10 plausible values for numeracy as described earlier. Advanced numeracy skills measured in PIAAC included preparing charts or graphs, using simple algebra or formulae, and using statistics or advanced math (e.g., trigonometry or calculus). A separate analysis examined frequency of use (never, less than monthly, monthly, weekly, and daily) of four basic numeracy use types: calculating costs and budgets (H_Q03B), calculating fractions or percentages (H_Q03C), using a calculator (H_Q03D), and using the internet to conduct financial transactions (H_Q05D).

For linear regression models, the first dependent variable was a derived index of use of basic and advanced numeracy skills (NUMHOME), ranging from -0.5 to 6.2 with mean of 2.3. The second dependent variable (NUMERACYUSE) was use of basic numeracy, with four basic numeracy use variables (described in the previous paragraph) summed to create a composite of use, with a range of 4 to 20. Hypothesized covariates from the literature review were age, partner status, parent status, education attainment, personal reasons for adult learning, and gender (NCES, 2019). A second pair of models predicted basic numeracy use from numeracy skills alone and separately from numeracy skills with the same covariates. Regression coefficients are standardized betas (B) for individual predictor variables. R^2 is the effect size for each model and measures the extent to which numeracy skills (and covariates) predict use of numeracy.

Results

Demographic Characteristics

The 350 adults in the PIAAC sample of adults taking AFE classes or tutoring ("AFE learners") represented an estimated 5.2 million AFE learners; all results in the following sections were weighted. To address RQ1, AFE learners ranged in age from 18 – 67 years, with a median age of 24 years. In contrast, median age was much higher, 43 years, with a range of 16 –74 years, for the full sample of 12,330 adults. Half of AFE learners were men (see Table 1). Ethnically, most AFE learners were Hispanic or White; in the full sample, two-thirds of adults were White. Regionally, most AFE learners lived in the South or West.

In the full sample, two-thirds of adults were living with a partner or spouse and were parents, with a median two children (range 1 – 19 children). AFE learners, though generally much younger, had family responsibilities, too (see Table 1). Two-fifths were living with a spouse or

partner, and nearly half were parents, with a median two children (range 1 – 8 children).

AFE learners also tended to have work responsibilities. Two-thirds of AFE learners were employed, with threefifths working full time; 1 in 8 were unemployed, and 1 in 5 were out of the labor force. In contrast, full-sample adults had higher rates of full-time employment and an unemployment rate less than half the AFE learner rate.

TABLE 1: Demographic Characteristics of AFE Learners and the Full PIAAC Sample

Characteristic	AFE Learner % (SE)	Full PIAAC Sample % (SE)
N	350	12,330
GENDER Male Female	53.2 (3.7) 46.8 (3.7)	49.0 (0.0) 51.0 (0.0)
ETHNICITY Asian or Pacific Islander Black Hispanic White	8.4 (2.3) 19.0 (2.8) 41.2 (3.3) 30.2 (3.6)	5.0 (0.4) 12.4 (0.1) 14.2 (0.3) 65.7 (0.5)
U.S. REGION Midwest Northeast South West	16.5 (3.1) 12.3 (2.8) 40.4 (3.7) 30.8 (3.8)	21.1 (0.0) 17.9 (0.0) 37.4 (0.0) 23.6 (0.0)
PARTNER OR SPOUSE	37.7 (4.0)	66.6 (0.5)
PARENT OF CHILDREN	46.3 (3.8)	66.1 (0.5)
EMPLOYED Full time Part time UNEMPLOYED NOT IN LABOR FORCE	67.6 (3.0) 61.2 38.8 12.9 (1.8) 19.5 (3.0)	70.7 (0.5) 79.3 20.7 5.2 (0.0) 24.1 (0.5)
IMMIGRANT	42.7 (3.5)	14.1 (0.4)
NON-NATIVE ENGLISH SPEAKERS	45.6 (3.5)	18.1 (0.4)
SPOKE ENGLISH NOT WELL OR NOT AT ALL	21.5 (2.8)	3.6 (0.2)
HEALTH Excellent or good Fair or poor	86.2 (3.5) 13.7 (2.0)	83.6 (0.5) 16.4 (0.5)
DIFFICULTY SEEING PRINT	11.9 (2.4)	12.3 (0.3)
LEARNING DISABILITIES	14.6 (2.4)	8.0 (0.3)

Source. U.S. Department of Education, National Center for Education Statistics, U.S. Program for the International Assessment of Adult Competencies (PIAAC), 2012/2014/2017.

AFE learner earnings were low; median wage was \$10/ hour (range \$1.11 - \$41.67), lower than \$16.70/hour in the full sample. For AFE learners earning monthly salaries, the median was \$1,515.67 (range \$0 - \$12,500 monthly), about half the full sample rate (\$2,916.70 monthly).

Two-fifths of AFE learners were born outside the USA, triple the full-sample rate. Nearly half of AFE learners were not native English speakers. Immigrant ELs indicated being in the USA a median 11 years (range 0 - 53 years). Only 1 in 5 ELs spoke English not well or at all – this rate was six times the full-sample rate, however.

Nearly all AFE learners reported good to excellent health, with 1 in 7 reporting fair or poor health and 1 in 10 difficulty seeing print. A high proportion of AFE learners reported being diagnosed with learning disabilities (LD), at nearly twice the full-sample rate.

Educational Background and Experience

The second research question addressed AFE learners' background and experience with education. Overall, onethird had not completed high school (see Table 2), almost triple the full-sample rate. Half of AFE learners were high school graduates, and the remaining 1 in 10 had at least some postsecondary education (PSE), at one-fourth the full-sample rate. Nearly one-third of AFE learners had parents not completing high school, higher than the full-sample rate, yet one-third of AFE learners each had at least one parent who did complete high school, or one or both parents with PSE. Nearly all had experience using computers at home (see Table 2). Many AFE learners were involved in both learning basic skills and HSE preparation in the past year; a 37% overlap occurred among adults learning basic skills and adults preparing for HSE.

AFE learners reported the main reasons for learning were personal interest or personal and work-related reasons equally, as shown in Table 2; fewer than 1 in 5 reported learning only for work-related reasons. These rates were similar to full-sample rates.

Responses on strategies AFE learners use in learning indicated they generally enjoyed learning and taking on learning challenges – at rates remarkably similar to fullsample rates. Most liked learning new things to a high or very high extent, could look for additional information, could attribute something new, liked to get to the bottom of difficult things, and could figure out how different ideas fit together. However, only two-fifths could relate ideas they learned into daily life (see Table 2).

In keeping with their AFE learner status, three-fifths reported no learning activities that they wanted to start within the past year but did not – a rate nearly twice the full-sample rate. Those facing learning barriers in the past year most often reported work schedule or family responsibilities keeping them too busy; 1 in 8 indicated classes were offered at an inconvenient time or place. These rates of barriers were similar to full-sample rates. One exception was cost; since AFE learner costs are minimal, only 1 in 10 could not afford the cost, half the full-sample rate.

Complementing these findings, many AFE learners experienced leaving education before completion; onethird indicated uncompleted education (see Table 2). Among those with uncompleted education, 47.1% had not completed high school or earlier grades, and 52.8% had attempted yet not finished PSE, often career-technical education (CTE; 25.4%), associate degree program (14.3%), or bachelor degree program (13.3%). In the full sample, only 7.4% had not completed high school, with nearly all leaving PSE programs.

AFE learners left their education experience a median 10 months earlier (range 0 - 21 months) at ages ranging from 13 - 54 years, median age 21 years. The most prevalent single age for uncompleted education was 17 years for AFE learners and age 20 for full sample, and a fourth of AFE learners left school before age 18, much higher than 4.7% in the full sample.

Numeracy Skills and Use

RQ3 and 4 addressed numeracy skills and skill use of AFE learners. The average numeracy score of AFE learners was 218.6 (*SE* 4.4, *SD* 51.3), placing them in numeracy Level 1, well below the Level 2 numeracy of adults in the full sample (average 255.5, *SE* 0.9, *SD* 56.5). Learners participating in basic skills averaged 237.5 (*SE* 8.2, *SD* 46.0), HSE learners had a mean numeracy score of 203.9 (*SE* 6.6, *SD* 44.7), and ELs averaged 216.4 (*SE* 7.3, *SD* 55.7).

AFE learners tended to use basic numeracy skills regularly – the median overall index of use at home was between 60% and 80%, distinct from the full-sample median of

TABLE 2: Education Background of AFE Learners and the PIAAC Population

Background Characteristic	AFE Learner % (SE)	Population % (SE)
Ν	350	12,300
EDUCATION ATTAINMENT Less than high school High school completion Some PSE or college degree	37.9 (3.5) 51.1 (4.1) 11.0 (1.9)	13.1 (0.2) 40.5 (0.4) 46.3 (0.4)
PARENT EDUCATION ATTAINMENT Less than high school High school completion Some PSE or college degree	30.7 (2.9) 34.4 (3.4) 34.8 (3.0)	17.8 (0.5) 42.4 (0.7) 39.8 (0.7)
EXPERIENCE USING COMPUTER AT HOME	82.1 (2.8)	85.3 (0.5)
REASON FOR LEARNING Personal interest Work-related interest Personal and work equally	45.1 (4.1) 18.5 (3.1) 35.4 (3.9)	47.7 (3.1) 18.2 (2.4) 34.1 (2.6)
LEARNING STRATEGIES Liked learning new things Could look for additional info Could attribute something new Liked to get to the bottom of things Could figure out how ideas fit Relate ideas they learned to life	84.0 (4.2) 77.9 (3.4) 65.7 (3.8) 66.1 (3.2) 61.6 (3.7) 40.2 (3.3)	80.1 (0.6) 79.5 (0.7) 68.0 (0.6) 68.9 (0.6) 61.1 (0.6) 46.4 (0.5)
LEARNING BARRIERS Desired learning not started Work schedule keeps too busy Childcare / family responsibilities Class time or place is inconvenient Cannot afford costs of learning	59.1 (3.1) 27.9 (5.9) 19.1 (4.8) 12.9 (4.8) 10.1 (3.0)	33.1 (0.7) 28.2 (0.9) 15.1 (0.7) 12.8 (0.6) 21.1 (1.0)
PREVIOUS UNCOMPLETED EDUCATION Left earlier education uncompleted Left education at age 17	33.4 (3.1) 15.9 (5.2)	29.1 (0.6) 2.3 (0.3)

Source. U.S. Department of Education, National Center for Education Statistics, U.S. Program for the International Assessment of Adult Competencies (PIAAC), 2012/2014/2017.

40% to 60%. Nearly half of AFE learners reported using calculators; 22.5% used a calculator daily and 25.6% did so weekly (see Table 3). Another 32.1% used numeracy daily to calculate costs or budgets and 29.4% did so weekly. However, fewer AFE learners (15.8%) calculated fractions or percentages daily or weekly (23.6%). Similarly, few AFE learners went online to conduct financial transactions – only 18.0% daily and 24.9% weekly. Rates approximate full-sample rates, except AFE learners had higher rates of never conducting online financial transactions and of daily use of calculators and calculating costs or budgets (see Table 3).

To address RQ4, regression analyses first examined how numeracy skills, with and without covariates, predicted use of basic and advanced PIAAC numeracy skills at home. In model 1, as shown in Table 4, numeracy skills alone were a significant predictor yet explained only 6% of variability in numeracy use. Model 2 added covariates for age, no partner/spouse, not having children, less than high school education attainment, having personal reasons for classes/tutoring, and female gender. In this model, numeracy skills with covariates explained 22% of variability in basic and advanced numeracy use. Numeracy skills with covariates were stronger predictors of overall

TABLE 3: Basic Numeracy Skill Use of AFE Learners

Numeracy Skill Use	Daily % (SE)	Weekly % (SE)	Monthly % (SE)	Less Than Monthly % (SE)	Never % (SE)
USE A CALCULATOR AFE learners Full Sample	22.5 (2.5) 15.4 (0.4)	25.6 (3.2) 34.1 (0.5)	16.7 (2.8) 21.5 (0.5)	18.4 (2.7) 14.6 (0.4)	16.7 (2.5) 14.4 (0.4)
USE OR CALCULATE FRACTIONS OR PERCENTAGES AFE learners Full Sample	15.8 (2.3) 14.2 (0.3)	23.6 (2.5) 23.8 (0.5)	11.9 (2.2) 17.4 (0.4)	14.3 (2.4) 17.5 (0.4)	34.4 (3.9) 27.1 (0.5)
CALCULATE COSTS OR BUDGETS AFE learners Full Sample	32.1 (3.0) 22.0 (0.5)	29.4 (3.3) 33.8 (0.4)	13.1 (2.3) 18.9 (0.4)	7.5 (1.5) 12.7 (0.3)	17.9 (2.4) 12.6 (0.4)
CONDUCT FINANCIAL TRANSACTIONS ONLINE AFE learners Full Sample	18.0 (3.0) 17.9 (0.6)	24.9 (3.5) 33.9 (0.7)	16.9 (3.1) 21.9 (0.4)	17.5 (3.2) 13.4 (0.4)	22.6 (3.1) 12.9 (0.4)

Source. U.S. Department of Education, National Center for Education Statistics, U.S. Program for the International Assessment of Adult Competencies (PIAAC), 2012/2014/2017.

numeracy use, significantly for unmarried adults and men, than numeracy skills alone. Age, no children, less than high school attainment, and having personal reasons for classes/tutoring were not significant in model 2.

Next, regression analyses considered how numeracy skills, individually (model 3) and then with covariates (model 4), predicted use of four *basic* numeracy skills at home (see Table 3). Numeracy skills alone explained 9% of variability in basic numeracy use (see Table 5). Numeracy skills with covariates (model 4) explained 26% of variability in use of basic numeracy. Significant predictors were numeracy skills, age, partner/spouse status, and gender. Model 4 better predicted basic numeracy use, accounting for younger age, unmarried adults, and men, than did numeracy skills alone. Having children, less than high

TABLE 4 Predicted Numeracy Skill Use of AFE Learners from Numeracy Skills and Covariates in Models 1 and 2

Model and Variables	B *	(SE)	р	R ² (SE)
1. BASIC AND ADVANCED NUMERACY USE AT HOME (<i>n</i> =350)				0.06 (0.03)
Numeracy skills	0.24	0.07	< .001	
2. BASIC AND ADVANCED NUMERACY USE AT HOME (<i>n</i> =220)				0.22 (0.06)
Numeracy skills	0.27	0.09	< 0.01	
Age	-0.12	0.08	NS	
Not having a partner/spouse	0.16	0.08	0.05	
Not having children	0.00	0.10	NS	
Less than high school education attainment	0.02	0.08	NS	
Having personal reasons for classes/tutoring	0.11	0.08	NS	
Female gender	-0.21	0.10	< 0.05	

*Standardized coefficient (B). Source. U.S. Department of Education, National Center for Education Statistics, U.S. Program for the International Assessment of Adult Competencies (PIAAC), 2012/2014/2017.

school attainment, and personal reasons for classes/ tutoring were not significant in model 4.

Discussion

Challenges to AFE Learners

Broadly, AFE learners face many challenges – in employment, uncompleted education, and health/disability concerns. Economically, their high unemployment rate (nearly 13%) was even higher than 5% in the full sample. For employed AFE learners, a high rate of part-time employment and median hourly wage of \$10, or monthly salary of almost \$1,516 (roughly \$18,000 annually), does not bode well supporting a family long term. Findings on how low numeracy relates to low income align with those of Jonas (2018) for native speakers and of Batalova and Fix (2015) for immigrants.

Additionally, many AFE learners already experienced leaving education before completion; not surprisingly, half left high school without completing. Given generally low numeracy skills, even those completing secondary education may have been unprepared for CTE or other PSE programs. This finding has implications for instruction in that AFE learners – whether native speakers or ELs – need to continue strengthening numeracy skills to successfully complete education credentials they want (Bergson-Shillcock, 2017; Grotlüschen, 2018; Patterson, 2020). Teaching skills in context of numeracy at home or in the CTE/academic PSE classroom has potential to support both uses. The desire of three-fifths of AFE learners to strategically relate ideas they learn into daily life also supports contextual numeracy instruction.

A third set of challenges encompasses health and disability concerns. Although health concerns were generally low, nearly 12% indicated difficulty seeing print, which hampers ability to see and calculate numbers or do online financial transactions (Patterson, 2019). Also, nearly 15% of AFE learners reporting an LD diagnosis presents an even higher rate than recent previous research found for adults with low numeracy skills (learners or not; Patterson, 2023).

Opportunities of AFE Learners

On the plus side, AFE learners have several numeracyrelated opportunities – namely, solid EL representation among AFE learners, interest in learning strategies, and computer experience at home. The strong representation in PIAAC of ELs (31%) among AFE learners is a plus considering less than a fourth of immigrants rated their English-speaking ability not well or at all. Approximately half of ELs appeared to have strong personal reasons to learn English. Although ELs' numeracy skill average was slightly higher than the 208 average of immigrants overall (Saal et al., 2018), both groups are still at Level 1 in numeracy, leaving plenty of opportunity for numeracy instruction.

AFE learner interest in learning strategies appeared high, offering another opportunity. Responses on strategies AFE

Model and Variables	B *	(SE)	р	R ² (SE)
3. BASIC NUMERACY USE AT HOME (<i>n</i> =350)				0.09 (0.04)
Numeracy skills	0.30	0.07	< .001	
4. BASIC NUMERACY USE AT HOME (<i>n</i> =240)				0.26 (0.09)
Numeracy skills	0.21	0.10	< 0.05	
Age	-0.23	0.09	0.01	
Not having a partner/spouse	0.20	0.08	0.01	
Not having children	-0.08	0.09	NS	
Less than high school education attainment	-0.08	0.07	NS	
Having personal reasons for classes/tutoring	0.03	0.08	NS	
Female gender	-0.18	0.09	< 0.05	

TABLE 5 Predicted Numeracy Skill Use of AFE Learners from Numeracy Skills and Covariates in Models 3 and 4

*Standardized coefficient (B). Source. U.S. Department of Education, National Center for Education Statistics, U.S. Program for the International Assessment of Adult Competencies (PIAAC), 2012/2014/2017.

learners use in learning indicated they generally enjoyed learning and taking on learning challenges. Where adult educators and tutors can connect the joy of learning new things to numeracy - whether seeking additional information or attributing something new - the potential for learning rises. Also, two-thirds of AFE learners like to get to the bottom of difficult things or figure out how different ideas fit together, and both strategies tie in well with instructional approaches to solving numeracy problems. A first potential resource instructors and tutors could consider on numeracy strategies is a 2023 LINCS module for professional learning on universal design in Making Math Matter (available at https://lincs.ed.gov/ state-resources/federal-initiatives/udl). Instructors and tutors will find additional strategic resources for designing numeracy instruction in Curry's (2019) PIAAC Numeracy Framework: A Guide to Instruction (available at https:// files.eric.ed.gov/fulltext/EJ1246047.pdf). Employing these resources along with general instructional practices such as using numbers in everyday situations, financial numeracy, measurement, and recipes - might further enhance numeracy use at home.

A last opportunity related to numeracy was computer experience at home. Four-fifths of AFE learners had experience using computers at home. This finding does not mean AFE learners are fully adept at using computers or comfortable with online learning; in fact, findings on online financial transactions indicate two-fifths of AFE learners seldom or never do so. They may also struggle with using computers for learning (Belzer et al., 2020). Still, experience with using computers indicates having some basic digital skills as a starting point for numeracy instruction. Since data were collected before the 2020-22 pandemic, shifts in online numeracy instruction and learner outcomes likely occurred in the interim (Belzer et al., 2022).

Numeracy Skills and Predicting Numeracy Use from Numeracy Skills

Average numeracy scores of AFE learners were generally at Level 1, well below Level 2 numeracy of U.S. adults overall. AFE learners in HSE and ELs were in Level 1 for numeracy, and basic skills learners averaged in Level 2. One explanation for this counter-intuitive subgroup finding is moderate overlap among adults in basic skills classes/tutoring and adults preparing for HSE – adults taking the BQ may have interpreted "basic skills" differently from its standard AFE use as representing ABE Levels 1-4.

Whether at Level 1 or 2 in numeracy, AFE learners clearly have needs for stronger numeracy skills, as found in previous research (Jonas, 2018; Oughton, 2018; Patterson, 2020, 2023; Saal et al., 2018; Sands et al., 2018). Not having skills may leave them vulnerable (Gal et al., 2020), especially if they are unemployed, have low income, or are in debt (Grotlüschen et al., 2019). Declining learner enrollment (Pickard, 2022) and pandemic-related instructional shifts in 2020 (Belzer at al., 2020, 2022) likely hampered strengthening numeracy skills beyond fundamental levels.

Encouraging findings from this paper include numeracy skills and covariates positively predicting AFE learners' use of numeracy skills at home. Marital status and gender may be supportive factors to using numeracy at home, particularly for single adults and men. Findings do not imply that partnered adults or women do not use numeracy skills at home, rather that, combined with numeracy skills they have, they tend to use numeracy skills less. Awareness of this finding can help instructors or tutors to encourage married adults and women to gain and use numeracy skills.

Also worth noting is, beyond an adult's numeracy skill level, having children, less than high school education attainment, and personal reasons for classes/tutoring did *not* significantly predict numeracy skill use. These characteristics may simply be prevalent among AFE learners regardless of numeracy skill use. Moreover, for the combined four *basic* skills involving calculations and financial transactions, (younger) age is a significant predictor; older adults may need more instruction or tutoring in numeracy skills to strengthen both skills and use of basic numeracy skills at home.

Findings add to results from recent practice engagement research (Lechner, 2023; Reder et al., 2020; Yamashita et al., 2022). Since numeracy skill use at home tends to increase as skill levels rise (Grotlüschen et al., 2016), given these new findings, instructional efforts to strengthen numeracy skills show promise to support skill use. Since practice engagement posits that using skills also strengthens them (Lechner, 2023; Reder et al. 2020), having learners simultaneously use and learn numeracy skills can support positive numeracy growth and lessen vulnerability. Use of resources suggested in this paper and its numerous references may benefit instructors, tutors, and AFE learners as learners practice and strengthen numeracy skills.

At this paper's start, the importance of seeking solutions to engage more adults in AFE was noted, and solutions are especially important to engaging adults with low skills. How programs brand their services and respond to adult's goals for learning is crucial to engagement. Labels as an HSE, English learning, or workforce program will not adequately communicate the breadth or value of available services for gaining numeracy skills and use. Adults needing numeracy skills will see themselves as welcome in programs where services offer explicit engagement in such topics as numbers in everyday situations, financial numeracy, and measurement; where, with instructional support, learners learn about these topics digitally; and where older adults, ELs, adults with disabilities, and other adults wanting to refresh basic numeracy skills can explore numeracy goals, participate in instruction or tutoring matched to goals, and practice their numeracy skills with other adults.

Limitations and Future Research

Noting limitations in sampling and regression analysis will help readers further understand the context of findings. Limiting the dataset to adults at least age 18 helped avoid including secondary students in compulsory education but likely excluded young adults ages 16 and 17 years who left high school early. PIAAC contains no precise indicator of "in compulsory education", so PIAAC researchers frequently limit by age to exclude secondary students from samples.

A limitation connected to future research is lack of correspondence between PIAAC and NRS levels. AFE learners in basic skills, HSE preparation, and EL programs were likely placed at different ABE or ESL skill levels, as measured by the NRS, than were measured in levels of PIAAC numeracy. Since PIAAC offers a cross-sectional dataset, it does not purport to measure AFE learner outcomes. Future researchers could compare cycles of PIAAC data for AFE learners and changes in numeracy skills that occurred. These comparisons would be particularly meaningful for the high proportion of AFE learners with disabilities and for those studying health concerns.

Also, in regression analyses, a relatively small number of covariates were included (compared with prior numeracy studies). The degrees of freedom were limited because of IDB Analyzer's listwise deletion structure. Therefore, when covariates were included in models, the number of learners decreased to 220 (for the first two models) and 240 (for third and fourth models), so a maximum six covariates and numeracy skills could enter models to reliably predict skill use. Future researchers could consider ways to expand the overall sample of AFE learners or employ a future indicator of leaving high school early that was proposed for PIAAC cycle two, with results released in December 2024.

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Research Article

"I Can't Apply Without Thinking!" Helping Migrants Develop Their Perceived Employability Through Self-Appraisal in an Online Job Search

Denise de Pauw, University of Leeds

Abstract

This paper explores the literacy experiences of migrant job seekers in the United Kingdom, looking online for work, adding to other studies on the topic. Using ethnographic methods, video data, images and field notes were gathered on visits to three research sites to observe job seekers and helpers of varied ages and educational and linguistic backgrounds. Data were analyzed using activity theory, to explore how participants' perceived employability was affected by online mediation during job searches. Extracts from three case studies show how impromptu discussions led to enriched understandings of the social world of work, vital for employability. The paper contributes specific digital employability literacies for a syllabus that includes low literate job seekers and recommends in-person or online mentoring for adult migrant job seekers, to provide personalized orientation to work or training, currently ill-afforded by much digital public employment support.

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Keywords: migrants, perceived employability, literacies, online job applications

This paper examines the experiences of three migrants in the United Kingdom, with English as an additional language (EAL), and their helpers, as they look online for work. The literacies of online job seeking remain widely under-researched, and potentially underappreciated. Increasingly, public employment services (PES) interventions are driven by technological change. Increasing reliance on digital employment support, punitive welfare sanctions and a reduction of in-person encounters with PES staff, reduces job seekers' opportunities to adapt and learn. This is especially true for migrants unfamiliar with host country employment marketplaces and selling themselves to specific job sectors. This paper examines unfolding online job searches, to answer the research question: what discourses and literacies shape the development of perceived employability?

It begins with the concept of employability, followed by an overview of public employment support for migrants, since the move to digital and a section on job-seeking texts. These lead into a summary of the theoretical frameworks and methodology. Findings from the three case studies are presented and the pedagogical implications for adult literacies within PES are discussed. Finally, the paper recommends how support for the development of perceived employability could be established, to complement existing online PES.

The Concept of Employability

Employability can be seen as an interactive framework in dialogue with the socioeconomic context, with responsibility shared between individual, potential employers and policy makers (e.g., Fugate et al., 2021; Green, 2017). The individual's evaluation of their own employability in relation to the job market has produced the narrower concept of "perceived employability" (e.g., Berglund & Wallinder, 2015; Farashah et al., 2023). It is the development of migrants' perceived employability, in interaction with the broader environment, with which this paper is concerned.

Green's (2017) interactive employability framework considers individual and environmental factors and was based on a scoping review of U.S. and European academic and policy documents on digital technologies and employability. In the framework, individual factors and circumstances, such as qualifications and transport interact with external factors, such as recruitment practices, transport links; and macroeconomic factors such as welfare regimes. Furthermore, it shows that to develop perceived employability, the job seeker must understand the broader employment environment, and this implies literacy demands.

Access to Public Employment Support

As elsewhere, anti-immigration sentiment and policies in the United Kingdom (e.g., McKinney, 2024; Taylor, 2018) discourage support for migrants (Craig, 2007; Dwyer et al., 2019), when support for existing populations is often rationed. The UK Welfare Act (2012) introduced benefits conditionality alongside "technological compulsion" (Clayton & Macdonald, 2013; Green, 2017) for job seekers by mandating them to apply online and introducing weekly job application targets and benefits sanctions. Simultaneously, austerity measures halved employment support and adult education funding (Bolton & Foster, 2018; Foster, 2019). In the United Kingdom since 2012, self-funding charity work clubs have provided computer access and help with applications to meet online job-seeking targets. Although welcome social spaces, they are too poorly resourced to be effective at moving migrants into work (Calò et al., 2021; Willott & Stevenson, 2013), especially those who need help with literacy, language or IT (Crisp, 2015).

Green (2017, p. 1649) described the rescaling effect these U.K. policy changes as a "negative vortex," where employers are overwhelmed by the volume of applications; job seekers spend less time on applications but submit many more than before; employers withdraw from the online PES systems; and ultimately, the number of vacancies on PES systems shrinks. Additionally, online recruitment tends to privilege the already advantaged, and entrench inequalities (Clayton & Macdonald, 2013; Rieucau, 2015), but despite these criticisms, similar online PES policies have been introduced elsewhere, ostensibly to eliminate unfairness and promote efficiency in resource allocation (Casey, 2022; Kobrin, 2024; Scott et al., 2022; Smythe et al., 2021).

Online PES seems to focus little on delivering employability support. In Australia, it also appears to emphasize individual accountability for welfare compliance, through self-reporting (Casey, 2022), rather than developing employability. Despite an enhanced service for people with multiple barriers, Casey (2022) highlights how digital self-reporting disadvantages vulnerable groups, grappling with self-reporting on the government digital dashboard.

Scott et al. (2022) studied migrant job seekers' experiences of online PES in Germany, where digital PES profiling tools were mainly used as predictors to allocate resources rather than provide information and guidance, which both job seekers and PES advisors would have preferred. Unsurprisingly, job seekers wanted to be treated "like humans" as did migrants in a wider European study (Fritz & Donat, 2017). They strongly preferred inperson contact, for easier communication, and wanted genuine personalized orientation to the job market. Similar preferences for in-person meetings were found in earlier U.K. studies into migrant and/or disadvantaged job seekers (Cheesbrough et al., 2018; Green et al., 2011; Marangozov, 2014).

The social aspects of employability frameworks are vital components, and the development of bridging capital, wider networks of more casual acquaintances, to access work, was identified by Canduela et al. (2015) as a worthwhile policy focus. Several studies (Giulietti et al., 2013; Green et al., 2011) show many migrants rely on close social networks to find work, which can also, depending on their composition, limit opportunities.

Social networks, especially insiders acting as knowledge brokers, were also highlighted by Wheeler and Dillahunt (2018). They examined how digital and social resources influenced the job searches of low-resourced job seekers in the United States. Their framework of the job search process starts with learning about the job market; then researching and self-evaluation in relation to vacancies; next, applying and preparing for interview; and finally, using connections for specific information or support that helped secure work (Wheeler & Dillahunt, 2018).

This aligns with Green's (2017) interactive employability framework and indicates how perceived employability can be developed. However, none of these studies addresses how a migrant with EAL would manage this, if the only PES available were digital. This is pertinent to so-called "job ready" highly educated professional migrants, a group whose underemployment arises from a combination of issues, including access to professional networks, and is well recognized (Allan, 2013; Clayton et al., 2016; Thondhlana et al., 2016).

Reading and Writing Recruitment Texts

Recruitment genres vary across cultures and sectors, even within the same domains (Baynham, 1995; Bhatia, 1993), and result from intersecting discourses and practices, such as marketing, equalities legislation, and data protection. Several studies show the literacy demands job seeking makes on migrants. Del Percio (2018) described how migrant job seekers in an Italian PES center were intensively trained to "read" the jobs market and repackage themselves accordingly. Many less educated job seekers lost motivation and withdrew. Benseman's (2014) study of low educated migrant job seekers in New Zealand noted that progress on employability courses was extremely slow and required sustained investment in acquiring alphabetic literacy, language and learning to learn, before actively looking for employment. Bigelow and Watson (2011) describe such literacy demands as crossing an abyss "from traditional orality to codified literacy to the digitacy of technologised culture" (p. 464).

Professionals also find aspects of recruitment texts difficult. Refugee professionals in the United Kingdom frequently struggled with completing forms, and writing CVs, leading in some cases to disillusionment about ever re-entering their professions or other employment (Willott & Stevenson, 2013). Bhatia (1993) highlighted the challenges of producing successful job-seeking genres, for migrants applying for work in the global north, due to unfamiliarity with writing modest yet self-promotional texts, based on self-appraisal in relation to vacancies. Applications should be tailored to present a credible relevant self, using the CV to document evidence of any claims in the cover letter. He claimed it is the successful portrayal of the "relevant self" that is paramount in job applications and "self-appraisal is its most important feature" (Bhatia, 1993, p.74). Using recruitment texts is therefore demanding, as is self-appraisal. Since the advent of online PES, these genres have become mandatory for all job seekers, not only professionals, usually forming part of a recruitment account set-up.

Online recruitment requires PES advisers and job seekers to constantly upskill and acquire new literacies. For example, Smythe et al. (2021) noted that job seekers need now write for a machine readership, as algorithms screen online resumes for relevant key words and may automatically reject those without. Kobrin (2024) describes the difficulties a mature job seeker with a professional background experienced, managing large volumes of recruitment emails, and critically evaluating frequent demands for personal information. Łacka-Badura (2015) describes online recruitment as a marketplace at "peak interdiscursivity," emphasizing the complexity of hyperlinked texts in recruitment that may add to the frustrations and mistrust experienced by Kobrin's (2024) participant. Dillahunt et al. (2021) mention many less traditional platforms used by successful job seekers, beyond Indeed or LinkedIn, and suggest that lowresourced job seekers could be encouraged to use online platforms more purposively, as well-educated job seekers tend to, for advice, referrals, and training.

Online recruitment makes assumptions about speed, ease, convenience, and fairness (Casey, 2022; Kobrin, 2024; Smythe et al., 2021). However, the above studies clearly demonstrate the complex literacy demands of online recruitment on applicants and helpers, in terms of choices not only about texts, including writing for non-human audiences, but also managing, finding, and trusting information and platforms. As several have argued (Clayton et al., 2016; Fritz & Donat, 2017; Roberts, 2010), language is often learned in the workplace, and is the result of integration, not its cause. The move to online PES and online recruitment more broadly poses additional barriers for migrant job seekers with EAL, as it may remove access to people from whom specific employability discourses can be acquired while increasing the literacies needed, which may be harder than the work itself. The next section outlines the theoretical frameworks used for this study.

Theoretical Frameworks

New literacy studies (NLS) (e.g., Barton & Hamilton, 2000) conceptualizes literacy as more than decoding and encoding texts; it is about understanding the culturally recognizable ways in which people use literacy (Maybin, 2000) and should be seen as a set of varied and dynamic situated social practices. NLS centers on observations of literacy events, occasions when texts are being used; it focuses on people's goals, thoughts, feelings and attitudes towards texts and acknowledges the role of literacy brokers, knowledgeable and trusted others, who collaborate with people in using literacies to achieve their goals (Papen, 2010).

NLS views texts, including speech, as the semiotisations of social practices, which can thus be inferred through texts (Street, 2001). Texts can therefore index broader discourses, particular patterned and recognizable ways of thinking being and doing (Fairclough, 2003). Knowledge of such broader discourses is implicit in Green's (2017) interactive employability framework, for example discourses around employer recruitment practices. Gee (2011) includes the use of material resources in his definition of discourse, claiming the necessity of being "in synch with various objects, tools, places, technologies and other people" (p. 152) for an individual to participate with "mastery" in a literacy practice. This draws on a multiliteracies conceptualization of literacies, (e.g., Cazden et al., 1996; Cope & Kalantzis, 2009), which views literacies as both multi-contextual and multimodal. All of the above foreground the dynamism of literacy practices, driven particularly by technological change and are useful to conceptualize online job seeking literacies.

Material resources are an important part of digitally mediated interaction, which happens simultaneously, across multiple devices and spaces, blurring boundaries between texts and events (Baynham & Prinsloo, 2009). Discourse analysis (e.g., Barton & Lee, 2013; Bazerman, 2004; Jones & Hafner, 2021; Shipka, 2011) has previously drawn on activity theory, as it focuses on actions rather than texts, so can include analysis of physical actions such as tapping and swiping a screen, as well as other modes of interaction.

Psychological activity theory (AT) (e.g., Bedny et al., 2000; Leont'ev, 1981) applies the principle of historicity to all mediational means, thus tools are cultural, and link individuals with the social world, past and present. All action is socially situated, mediated by the body or external tools, and motivated by goals, and action is the prime unit of analysis. Mediated actions have semantic, syntagmatic and pragmatic features that, when seen as part of meaning making, constitute practices, much as words constitute sentences (Bedny & Karwowski, 2004, p. 145). Observation of actions renders practices visible. By focusing on the individual, acting in a social environment, AT makes a bridge between the individual and collective activity (Leont'ev, 1981) such as recruitment, job seeking or welfare. It provides a structure to account for an online job application as a goal-focused mediated individual activity, within the social world of job-seeking. It can make visible the variance between individual and collective motivations (Wertsch, 1985) and the affordances and constraints of mediational means (Jones & Hafner, 2021; Shipka, 2011). The following section outlines the study design and analysis.

Methodology

An ethnographic approach was used, aligned with NLS and AT. Participants were recruited using contacts with a local charity work club, and a large, specialized English for speakers of other languages (ESOL) center, which ran a student job club. Participants were a convenience sample, as attendance was uncertain. Using participant observation over a series of visits to research sites, three case studies were conducted (Table 1), with participants of various ages, education and language backgrounds. Video recordings of unfolding job searches, job seeking texts and field notes were collected, followed by semi-scripted interviews. In case studies 1 & 3, the participants were job seekers and their support staff. In case study 2, I became involved, as the participant, a highly qualified professional, was applying from home without PES support.

AT (Leont'ev, 1981) has three interdependent levels of analysis: activity, action and operation, which interact,

shaping events. The data were analyzed in relation to ongoing self-appraisal of perceived employability, using these levels. Resources such as skills, qualifications, and social networks were considered at the level of operations. Macroeconomic factors such as employment policies were considered at the level of activity. Recordings of job applications were transcribed and analyzed as actions, which included talk as a mental action (Bedny et al., 2000). Data for in-depth analysis were selected by reviewing the video data and fieldnotes, looking for moments of uncertainty or hesitation, at the level of action, which signified where unfamiliar practices intersected (Scollon, 2001; Shipka, 2011), and goals and tasks began to be adjusted in relation to resources and circumstances, as participants self-appraised.

The multimodal data were imported into an NVivo project, then linked to the respective video segments. I initially transcribed talk manually in NVivo and coded the videos for actions (Figure 1). Actions are represented as different colored stripes, shown in Figure 1 to Figure 4. These coding stripes graphically illustrated job applications as sequences of lower and higher level actions, constituent of practices. They showed the complexity of action sequences and where activities overlapped. They also showed individual levels of participation in the events, shifts in prominence of different participants, and indicated how that could be related to knowledge, power, agency, and identity.

A transcript of talk created in NVivo was exported to a table in MS Word (Figure 5), which was expanded for further analysis, with columns for talk, practical actions, texts, tools, and discourses. Finally, actions were sequenced and grouped into job seeking stages, according to goals (Bedny & Karwowski, 2004) identified in the data, for example "searching"; "reading an advert"; "logging into a recruitment account"; or "uploading a CV." Each case study was analyzed separately, followed by meta-analysis, to ascertain connections across the cases (Figure 6), in terms of broader intersecting discourses and practices in different interaction spaces (Jones, 2005).

The next section presents findings from one extract of data analysis from each CS, before discussing their connections.

Findings

CS1 JK at the Charity Work Club: "Are you fit?"

The research site is an inner-city hub of a major charity that works to alleviate the impacts of poverty, though volunteer-run community enterprises, clubs, and classes. Job seekers JK (M) and Selden (F) were a married couple in their late 50s-early 60s, settled in the United Kingdom for 6 years. From Bhutan, they were fluent in Hindi and Urdu and spoke very basic English. They were weekly work club regulars and had a good rapport with their volunteer, Brian. They were mandated to apply online for 5-9 jobs a week each, but had no computer at home and needed help with literacy, language, and IT. They participated easily in the work club banter, a blend of Hindi, Urdu, and English, typical of the wider community it served. Brian often ran the work club and inducted new volunteers. Shona, a mature student from Zimbabwe, was a new volunteer learning from Brian.

This extract is from one of their weekly work club sessions. Brian was sitting between Selden and novice volunteer, Shona (Figure 7). Shona was working with JK, to her left and Brian was working with Selden, while also coaching Shona on volunteering practices. This vacancy was for a part-time cleaning job.

Explaining the Job

JK can read simple texts with familiar words, so was seated at the monitor, ready to participate fully in reading and understanding the job description. The action opened as Shona explained a job description, negotiating with JK for permission to apply. Shona's initial talk concerned establishing the suitability of the job. Rather than simply reading aloud or to herself only, she turned to JK and acted out key information from the advert as she read (Figure 8). JK mirrored her gestures, sometimes hesitantly, perhaps to clarify understanding. Shona also spontaneously recast the key points in the job description in more simple language, for a less expert EAL user.

Shona and JK's actions and talk show both were completely engrossed in understanding the job advert, to the extent of almost performing the text together. Shona's use of gesture, posture and eye movement made JK laugh, and they were close collaborators, striving for mutual understanding, during these two minutes. There was also a brief exchange around norms of workplace behavior and reliability, as they joked about phoning in sick below:

Shona: Must be reliable.

Shona turns to JK, smiles and leans towards him conspiratorially.

JK: Reliable?

JK does head wobble.

Shona: No off sick

JK and Shona look at each other and laugh.

JK: Hahahaha ah!

JK puts his hands over his face, laughing.

Such moments of intense communication between JK, Selden and their volunteers tended to happen at the end of the session, when volunteers were summarizing job application targets, so this was unusual. There was significant task modification in Shona's collaboration with JK to negotiate consent to apply, their immediate goal, and much of the work was about clarifying meaning, to ensure genuine self-appraisal.

"Is it worth it?"

Suddenly, Brian interjected to point out the job was just 2 hours a day. Brian and Shona's ideas about "suitable work" differed: Shona was concerned about the length and cost of travel, i.e., the economic value of work to the worker: "Is it worth travelling there?" Brian echoed job center discourses about travelling a reasonable distance: "Yeah because it's in [town] he'll be still able to travel," a discourse of individual responsibility for employment, rather than acknowledging systemic barriers, such as poor transport networks or an inadequate supply of appropriate jobs, which demonstrably existed here:

Shona: I know but it's in [town] seven pound fifty how much is the day rider?

Brian: Four pound ten

Their different attitudes were conveyed as much in their intonation as what they said. Brian sounded reasonably optimistic, "I know I know it looks very you know.. [town] ..it's just up the road actually" while Shona's voice had a downward intonation: (sighing) "That's fine" as she considered the distance and expense of travel in relation to the working hours. Both were drawing on local knowledge, but Shona lived locally, whereas Brian did not.

Brian was very experienced at Indeed applications, so could probably anticipate the simplicity of the application, and that there was only a slim chance of an interview. Both likely led to his positive evaluation of the application, as it would contribute to meeting JK's target number of job applications, which had to be done in that hour.

Shona's focus on engaging with JK and negotiating permission to apply for the job with his full compliance was dropped, as she was persuaded by Brian's repetition of the more dominant discourse, that any work experience is worthwhile, even when there is no economic benefit. In effect, JK would be working for free, but he was not consulted and was relegated from being a co-participant in the application, to being totally dependent on the volunteers' judgement. A new goal, contributing to job seeking targets, was imposed by Brian's intervention. Shona's activity changed from genuinely applying for suitable work for JK, to welfare compliance.

Applying

After clicking "apply," this application took 14 seconds and is an example of the routine application practices used in the work club. As observed elsewhere, Shona checked the contact details but made no edits to the CV itself. The breath-taking speed of this application drives the discourse about online applications being "easier,", a discourse used to justify a welfare policy of forcing claimants to apply online to be eligible for job seeker benefits, and the use of job seeking targets.

Equally concerning, the pressure to meet targets means that there is no knowledge transfer to the job seeker: applications were frequently done without JK or Selden's involvement, and they were not helped to articulate their own desires. The ease and speed of a click-through application on a recruitment platform such as Indeed often prevented this, as here.

CS2 Parastou at Home

Parastou was a senior contract manager before coming to the United Kingdom 4 years previously, to study for an MSc in Business. Circumstances changed in her final year and her family was forced to apply for asylum. She had only recently been granted permission to work and was unaware she could use her university careers service after graduation. As her English and IT skills were very advanced, she had received minimal support from PES, beyond a session to add key words to her CV. Somewhat confusingly, she had also been advised by PES and recruiters to aim for lower-level work as she had "no experience in the UK." In this extract, she was at home, checking emails for administration assistant vacancies on her mobile. I am spontaneously providing support. She has just rejected one vacancy, as it mentioned proofreading skills, and now she was reading another email, for an HR administration assistant.

HR Assistant, Advertised on Reed.co.uk

Parastou could immediately relate to the Human Resources discourse in the advertisement, which referred to a "CIPD qualification" (unfamiliar to me), by drawing on her academic knowledge, which supplied the motivation to read further. The application lasted ten minutes, during which Parastou handled long sequences of information related to the different tasks she carried out. The most difficult and time-consuming was understanding the metaphor of "employee life cycle" (Figure 9) listed under "required skills": five of the 10 minutes is devoted to this. Parastou did not tailor her CV or write a cover letter for this application, being unaware of their importance for signaling her match to a specific vacancy.

Recognizing the phrase was a metaphor, understanding what it meant, then interpreting this in relation to its appearance as a "skill" in the job description presented a significant series of challenges. Initially, Parastou unconsciously drew on her digital information management skills and consciously on her academic knowledge, and English. If Parastou had not recognized the CIPD qualification, nor identified strongly with human resources discourses ("I did lots of HR"), she may have decided against applying, once faced with unpicking the above.

Although it took only 10 minutes of time, very intense work was being done, therefore her motivation had to be high. I guessed what "life cycle" meant, immediately recognizing a metaphor, and immediately suggested a Google search. The first search result, filled with advertisements, deterred her from reading further, so I attempted to explain the metaphor, but Parastou did not understand the connection with the job advert. She needed to work out both what the metaphor meant and its use in the advert, under the heading of "skills," itself an ill-defined term.

Parastou seemed to interpret "skill" as an ability to do something, whereas my interpretation related to my perception of the job grade, based on the responsibilities and pay. An expert English user, with knowledge of the employment field, could make an informed judgement about this, but we could only make an educated guess. We pooled her academic knowledge with my linguistic knowledge and cultural awareness of the position of low paid administrators in an employment hierarchy, to understand the metaphor use in the job advert, that despite its categorization under "skills" (Figure 9) it was more a matter of "knowing about" than "doing."

This collaborative interpretation of "employee life cycle skill" as "knowing about" resulted in a positive selfappraisal from Parastou, motivating her to research the meaning further and as she skimmed through a very detailed explanation of the concept, her confidence increased. Her final decision to "just apply" was thus made very quickly. Parastou's motivation to engage in the demands of "thinking" was much higher when she could identify with something familiar in the advert. Not understanding acronyms or concepts in relation to the job descriptions interfered with her understanding of the roles and ultimately her perception of her employability.

CS3- Fernando and Robina in the ESOL Center Student Job Club

"Searching"

Fernando was a teenage school leaver, recently arrived from Italy to join family. He was a full-time student at the large local ESOL center and was looking for a part-time job, having never worked before. Robina ran the center job club and was an ESOL specialist with a counselling background. As Fernando was very unsure what kind of work he wanted, Robina suggested they log in to a recruitment site, Total Jobs, and search based on location, working hours and salary, rather than job title. The action opened when, after more than ten minutes of skimming through the results of this progressively more filtered job search, supermarket work caught Fernando's attention. Fernando's cursor hovered on the job title "sales assistant" and his questioning intonation as he said "This one is sales assist" signaled uncertainty but also potential interest in an area of work. Throughout this part of the search, Robina drew on her ability to simplify information, relating the somewhat abstract job title "sales assistant" to the concrete observable practices of serving customers in a shop:

Robina: Assistant sales assistant means you work erm behind the counter or in a shop and you sell things to people so it's like a shop assistant

Fernando lets go of the mouse and turns to look at Robina. He nods at her explanation, turns back to the screen and continues to scroll.

Fernando then adopted the same strategy as Robina, of describing the practices of the role, to begin to define his career identity, even though he lacked the precise vocabulary to express this more fluently. He used words and gestures, miming the actions of picking up products and putting them down elsewhere.

In so doing, Fernando refined and communicated his real goal – one which he had appraised himself as capable of achieving. Robina lacked the recruitment terminology but Fernando's description and miming of his nascent career identity led to Robina's statement "OK, so that job erm is called 'shelf stacker'."

Robina: Ha ha people in supermarkets often do many jobs so sometimes they stack the shelves and sometimes they work on the till

She waves her hand from side to side.

Fernando: Ah

Robina: And sometimes they do different things erm OK if you want you can search for shelf stacker and let's see just be curious and see if it exists

She waves at the screen and Fernando picks up the mouse again.

In saying "let's just be curious," Robina encouraged an experimental approach to searching, creating the opportunity for trial and error with different key word combinations.

Robina and Fernando's activity was one of exploratory, collaborative learning, embedded in the conscious goal of searching for a job. In fact, they were developing Fernando's perceived employability. This was evident in the encouragement provided by Robina, whose motivating activity was not to find Fernando a job, but to help him to explore possibilities, which she did by helping him to access the search discourse. The search term "shelf stacker," as predicted by Robina, did not reflect retail employment practices, and so the Total Jobs website, designed for more industry specific job titles, such as "pick and packer" did not produce relevant results. Nevertheless, there was no external pressure to find a job. This unfolding event was shaped by Robina's willingness to let Fernando experiment during the process of achieving his goal of finding a suitable vacancy. This experimentation also gave her time to reflect on alternative ways to achieve his goal, based on personal experience, cultural knowledge that contributed significant efficiency to the search.

Fernando's default search tool is Google, and while he experimented with this, Robina remembered that supermarkets often have their own recruitment websites. Asking him about his nearest supermarket, she focuses the search on his local supermarket, Tesco. Later, as they read the adverts on Tesco careers, and began an application form, Robina explained some of the social expectations of supermarket work, using a simple work schedule as a starting point for rich life lessons.

Fernando's conscious goal of finding a job was somewhat different from his activity, which was learning language and retail work practices, and appraising himself in relation to these. In other words, he was simultaneously developing his perceived employability and the language with which to express it.

Discussion

Self-Appraisal and Welfare Compliance

The analysis shows how self-appraisal shapes perceived employability in interaction with the available resources and circumstances and moreover, how digital welfare compliance constrains the development of perceived employability. The findings add insight into the use of digital mediation to earlier studies about migrant job seeker literacies (Bhatia, 1993; Del Percio, 2018). Wheeler and Dillahunt (2018) refer to the use of knowledge brokers that helped secure work in the final stage of job seeking, and this study shows these could be relevant much earlier, to mitigate some of the constraints of online mediation.

All the case studies demonstrated that perceived employability involved self-appraisal right from the beginning of the search, and that discourses of both searching and specialized employer sectors were vital. JK's extract shows the contradictions in doing Dillahunt et al.'s (2021) preparatory and active phases of job hunting simultaneously. Like Casey (2022), it demonstrates how welfare compliance and technological compulsion reduces PES to simply accessing technical support. It also shows how much of the literacy work is obscured and rendered inaccessible to the job seeker wanting to develop their individual perceptions of employability. The implication for PES practitioners is the need to ensure that pedagogy, not welfare compliance, is at the forefront of employability development.

Self-Appraisal and Language Repertoires

Shona successfully helped JK to read and understand normative expectations for cleaning work. However, JK's multilingual repertoire is not recognized as an employability resource, despite the work club being a multilingual space in a very diverse community. The workplace itself is the site of much situated language learning, as Clayton et al. (2016) note. JK's fluency in local community languages could be sufficient for entry into a multilingual workplace, where others act as literacy and language brokers. JK himself wanted to be put directly in touch with an employer and shown the work, rather than waste his time and energy on trying to meet the literacy demands of mandated online applications, themselves harder than any job. This would genuinely facilitate his perceptions of employability, something which Berglund and Wallinder (2015) found contributed also to resilience in times of precarity. It is imperative that PES advisors acknowledge individual job seekers' wishes and help them mobilize their resources according to the local environmental context, as Shona had begun to do.

Initial Self-Appraisal and Literacy Brokers

Literacy (Papen, 2010) or knowledge brokers (Wheeler & Dillahunt, 2018) contributed significantly to ongoing motivation. Shona, Robina and I spontaneously engaged in exploratory and explanatory talk around the texts. This was vital for unpacking the social practices implicit in the job adverts and in Parastou's case, enabled insight into how the role fit into the workplace hierarchy. Time is needed for exploratory personalized discussions around preparing for work, in which PES advisors and clients can share their local and cultural knowledge. Even deciding to apply required an emergent perception of employability. Robina helped Fernando here, by beginning a very shallow self-appraisal based on geographical location and working hours-basic needs and circumstances. Basic digital search literacies, such as filtering, could form part of a PES syllabus for loweducated job seekers. Somebody who can read words and simple sentences, and use a keyboard and mouse, e.g., JK, could be supported to start searching online in this way. Similarly, experimenting with key words, that belong to particular industry discourses, could be taught, as Robina did. Robina's insights led to the eventual success of Fernando's job search and self-appraisal. She also shared knowledge of specific recruitment practices, for example corporate in-house careers websites, such as Tesco, a knowledge gap highlighted in the literature (Dillahunt et al., 2021; Green, 2017; Scott et al., 2022; Wheeler & Dillahunt, 2018). The above examples show that small practical interventions can make searching and selfappraising easier and increase motivation to persevere.

Tailoring Online Applications

The speed and convenience of online applications resulted in less tendency to tailor CVs and covering messages, which Bhatia (1993) regards as vital. Surprisingly, Parastou also neglected this, which underlines the importance of connecting migrant job seekers with literacy brokers or mentors relevant to their fields and roles of work, when ready.

Mentoring would benefit all job seekers and could be integrated into online PES, affording the genuine personalized orientation so lacking in algorithmic tools (Scott et al., 2022). With mentor input, a perceived employability syllabus could move towards job activation stage genres. Job seekers could be taught how to signal their match very specifically by deploying discourses used in candidate briefs, job descriptions and advertisements, beyond mere inclusion of generic key words to make CVs machine readable. This is what Parastou, like professional participants in previous studies (e.g., Willott & Stevenson, 2013), lacked.

Implications for Practitioners

Self-appraisal is a collaborative ongoing endeavor towards developing a perception of employability, which both

demands and encourages oracy development. All job seekers need to learn to express their beliefs, needs and desires, as well as identify and mobilize relevant knowledge, experience and bridging capital. Knowledge of host country work, education and welfare systems cannot be assumed. Practitioners can foster more realistic self-appraisal by explaining, for example, qualification levels, vocational pathways and sector jargon, teaching language for describing relevant experience, and how to use bridging capital, e.g., for references. Prioritizing even very simple personalized discussions helps job seekers to self-appraise and thus search more effectively, understand recruitment discourses when reading adverts and eventually complete successful applications.

Limitations and Future Directions

The case studies were limited to two neighboring northern United Kingdom cities. Different research sites and participants could have produced very different results, as could other methods, such as focus group interviews. However, the findings align with other studies about online PES and migrants looking for work and add to their recommendations.

Using actions as the unit of analysis, rather than the somewhat broader unit of observable practices, such as writing application emails, meant that only quite short sequences of data could be analyzed in close detail. Nevertheless, such close attention to micro-level actions such as clicking and scrolling enabled the pinpointing of the complex demands of online job-seeking literacies and could be a fruitful method for further employability literacies research, especially with increasing use of online only PES.

Conclusion

Job search literacies reflect an intricate web of situated practices, requiring insider knowledge, without which even well-educated job seekers struggle to self-appraise and develop their perceived employability. The speed and convenience of online applications under benefits conditionality can thwart the development of perceived employability, and associated literacies. However, perceived employability can be developed, even for low educated EAL job seekers, by teaching literacies associated with initial self-appraisal, such as learning to use key word for basic searches, using filtering functions, and unpacking "soft skills" discourses.

Separating the literacies required in preparatory and active job seeking phases, combined with mentoring, would increase opportunities to learn about broader recruitment processes, the social world of work and specific workplace discourses and practices, necessary in Green's (2017) employability framework and so desired by migrants (Cheesbrough et al., 2018; Green et al., 2011; Marangozov, 2014; Scott et al., 2022).

An important ethical question for PES practitioners is, "Am I developing employability, or am I merely supporting welfare compliance?" Without personalized support, disadvantaged groups may remain trapped in a system of performative job seeking, simply to access welfare, and risk permanent underemployment or complete exclusion. In the context of welfare rationing, integration and longer working lives, such a situation is another negative vortex for all.

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TABLE 1: Details of research sites, participants and data collected for each case study.

	Case study 1	Case study 2	Case study 3	Data collected
Job seekers	Selden (wife) and JK (husband)	Parastou (F)	Fernando (M)	Video, screenshots, photos, texts used in interactions,
Age	Late 50s/early 60s	40	18	follow up interviews
Arrival in United Kingdom	6 years before, under refugee resettlement program	4 years before; forced to claim asylum in final year	3 months before to join family	
Education and work	No formal schooling; agriculture and road construction (JK); domestic and agriculture (Selden). Languages: Dzongkha, Nepali; Hindi and Urdu; basic English	MSc Intl. Business, U. K. university; successful management career Languages: Farsi; very advanced English (for academic purposes)	ESOL level 1 in further education college (England); Italian high school certificate, no work experience. Languages: Italian, Ghanaian; intermediate English	
Data collection site	Charity work club	Parastou's home	Student job club	
Support staff	Volunteer Brian: from UK Volunteer Shona: from Zimbabwe, student in UK	Me: participant observer, UK.	Learning support assistant Robina: from UK	

FIGURE 1: NVivo transcript and video with coding/action labels

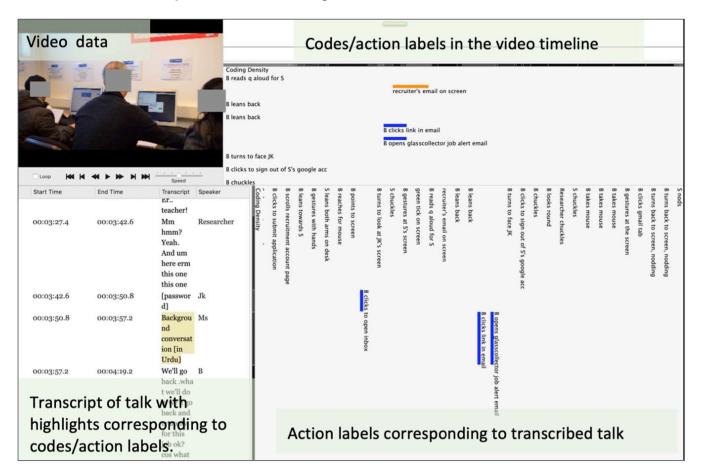


FIGURE 2: Screenshot of coding showing higher level actions, e.g., B writes an email job application; B types activity history into UJM

			00:10:00.0													00:15	0.00
			Coding Density				-	_	_	-	-	-		-	-		
ALC: NO	EPTS PELONT PARADOD	and the second s	B-JK seating arrangement														
			jk sits back, watching screen				-	-	-		-	-		-	-		
	-	1	B writes an email job application	•													
				B types or clicks	without talking												
				B types activity	-											_	
		FF		B types activity	nistory into UJM												
		AL	B types email message silently							_							
		Mar (Sol)								B write	s activi	ties in j	ob search	bookle	et		
	Sugar	ATT	B types log in details														
		AND REAL PROPERTY AND A	8 writes down email address on paper														
								8 expla	ains wh	hat he's d	oing to	JK					
				B turns to face JK				_		•							
			B types in email employer's address	a carris to race pr													
			B types in email employer's address														
			B asks for pen and paper														
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Loop He	End Time	Speed Transcript	B asks for pen and paper		Speaker	Co	1	8 8 ¥ 2		8 W		80	8 77	8 10	8 0	affe	8.7
	End Time 00:09:07.6	Transcript	B asks for pen and paper		Speaker B	Coding	jk sits b	B types B writes	8 types	8 writes	8 writes	B turns B explai	B asks f	B looks	jk leans B opens	affect B reads	8 types
Start Time		Transcript	II asks for pen and paper III looks at screen silently		Speaker B Researcher	Coding Den	jk sits back,	B types or d B writes an e	B types ema B types activ	e types rog 8 writes acti	B writes dow	B turns to fa B explains w	8 asks for p 8 types in e	B looks at se	jk leans in t B opens Cm	affect B reads alou	8 types in su
Start Time 00:08:51.9	00:09:07.6	Transcript I wanted I wanted this in	E asks for pan and paper E looks at screen silently blackhow would you put it into black colour?		В	Coding Density	jk sits back, wat	B types or clicks B writes an emai	B types email me B types activity h	B writes activitie	B writes down er	B turns to face JP B explains what	8 asks for pen a 8 types in email	B looks at screer	jk leans in to loo B opens Cmail in	affect B reads aloud	B types in subject
Start Time 00:08:51.9 00:09:07.6	00:09:07.6 00:09:14.8	Transcript I wanted I wanted this in I'm not sure	E asks for pan and paper E looks at screen silently blackhow would you put it into black colour?		В	Coding Density	jk sits back, watchin	B types or clicks with B writes an email Job	B types email messa B types activity histo	B writes activities in j	B writes down email	B turns to face JK B explains what he's	B asks for pen and p B types in email emp	B looks at screen sile	jk leans in to look at B opens Cmail inbox	affect B reads aloud	8 types in subject lin
Start Time 00:08:51.9 00:09:07.6 00:09:14.8	00:09:07.6 00:09:14.8 00:09:16.9	Transcript I wanted I wanted this in I'm not sure AhI don't know who put	k aks for pen and paper B looks at screen silently blackhow would you put it into black colour? it in that colour like?		B Researcher B	Coding Density	jk sits back, watching scr	B types or clicks without B writes an email job app	8 types email message si 8 types activity history in	B writes activities in job s	B writes down email addr	B turns to face JK B explains what he's doin	B asks for pen and paper B types in email employe	B looks at screen silently	jk leans in to look at scre B opens Cmail inbox	affect B reads aloud	B types in subject line
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itart Time 10:08:51.9 10:09:07.6 10:09:14.8 10:09:16.9 10:09:21.1 10:09:24.9	00:09:07.6 00:09:14.8 00:09:16.9 00:09:21.1 00:09:24.9	Transcript I wanted I wanted this in I'm not sure Ah. I don't know who put He heh Why do you want to chan Cos the it when when you	E asks for pan and paper E looks at screen silently black.how would you put it into black colour? it in that colour like? ge the colour?		B Researcher B Jk	Coding Density	jk sits back, watching screen	B types or clicks without talking B writes an email job application	B types email message silently B types activity history into UJM	B writes activities in job search bo	B writes down email address on p	B turns to face JK B explains what he's doing to JK	B asks for pen and paper B types in email employer's addre	B looks at screen silently	jk leans in to look at screen B opens Cmail inbox	affect B reads aloud	B types in subject line
tart Time (0:08:51.9 (0:09:07.6 (0:09:14.8 (0:09:16.9 (0:09:21.1 (0:09:24.9 (0:09:32.3	00:09:07.6 00:09:14.8 00:09:16.9 00:09:21.1 00:09:24.9 00:09:32.3	Transcript I wanted I wanted this in I'm not sure Ah I don't know who put He heh Why do you want to cham Cos the it when when you Mm yesis italong the b	E asks for pen and paper B looks at screen silently blackhow would you put it into black colour? it in that colour like? ge the colour? Ye sending a email regar [cough] regarding work it looks official		B Researcher B Jk Researcher B	Coding Density	jk sits back, watching screen	B types or clicks without talking B writes an email job application	B types email message silently B types activity history into UJM	B writes activities in job search booki	B writes down email address on pape	B turns to face JX B explains what he's doing to JK	B asks for pen and paper B types in email employer's address	B looks at screen silently	jk leans in to look at screen B opens Cmail inbox	affect B reads aloud	B types in subject line
Start Time 00:08:51.9 00:09:07.6 00:09:14.8 00:09:14.8 00:09:14.9 00:09:21.1 100:09:24.9 00:09:32.3 00:09:42.7	00:09:07.6 00:09:14.8 00:09:16.9 00:09:21.1 00:09:24.9 00:09:32.3 00:09:42.7	Transcript I wanted I wanted this in I'm not sure Ah I don't know who put He heh Why do you want to chan Cos the it when when you Mm yesis italong the I Ah yes! Yeah ermtext o Ohhhhe!	a asks for pen and paper B looks at screen silently blackhow would you put it into blackcolour? it in that colour like? ge the colour? re sending as email regar [cough] regarding work it looks official ottom? See those little pictures along the bottom, next to send what's the one next to send? Y colour. Black.that's what I want		B Researcher B Jk Researcher B	Coding Density	jk sits back, watching screen	B types or clicks without talking B writes an email job application	B types email message silently B types activity history into UJM	 e types roy in version B writes activities in job search booklet 	B writes down email address on paper	B turns to face JK B explains what he's doing to JK	B asks for pen and paper B types in email employer's address	B looks at screen silently	jk leans in to look at screen B opens Gmail inbox	affect B reads aloud	B types in subject line
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Start Time 00:08:51.9 00:09:07.6 00:09:14.8 00:09:16.9	00:09:07.6 00:09:14.8 00:09:16.9 00:09:21.1 00:09:32.3 00:09:32.3 00:09:42.7 00:10:01.4 00:10:07.9	Transcript I wanted I wanted this in I'm not sure Ah I don't know who put He heh Why do you want to chan Cos the it when when you Mm yesis italong the I Ah yes! Yeah ermtext o Ohhhhe!	a asks for pen and paper B looks at screen silently blackhow would you put it into blackcolour? it in that colour like? ge the colour? re sending as email regar [cough] regarding work it looks official ottom? See those little pictures along the bottom, next to send what's the one next to send? Y colour. Black.that's what I want		B Researcher B Jk Researcher B Researcher B Researcher	Coding Density	jk sits back, watching screen	B types or clicks without talking B writes an email job application	B types activity history into UJM	e types roy in ucuans B writes activities in job search booklet	8 writes down email address on paper	B turns to face JK B explains what he's doing to JK	B asks for pen and paper B types in email employer's address	B looks at screen silently	jk leans in to look at screen B opens Cmail inbox	affect B reads aloud	B types in subject line

FIGURE 3: Screenshot showing intermediate and lower-level actions, e.g., B types in employer's address; B types in subject line.

Wc_JKR_1_06.03.2018			
	phina april a marily many	in any eld wally a myselman .	man at the internet of the state of the stat
	00:00:00.0	00:05:00.0	00:10:00.0
	Coding Density B asks for pen and paper pointing and gesturing exophorically B reads aloud to himself ik leans in to look at screen	B types in email employer's address B looks at screen silently B opens Gmail inbox	B turns to face JK
		affect 8 types in subject line	researcher points to specific items on screen B scans screen top of screen for editing controls B talks to himself

FIGURE 4: Screenshot showing function blocks becoming conscious actions, e.g., B highlights entire email text with mouse; B clicks to change text color

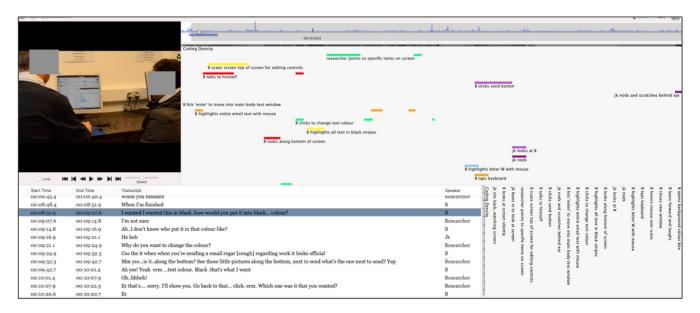


FIGURE 5: Example of multimodal transcript used for analysis

timeline	discourse	activity	texts	Actions in	literacy eve	ent	Operation- tools, methods, resources, circs, affect	Talk												
	Employability discourse- flexible working			Brian sits b	ack and rel	leases mouse		Brian: "How many hours are you available to work and on which days o' the" there you gogo there												
	Brian's interpretation	Gathering data for a PhD		I step forw	ard to take	photo														
00:07:08.2	related to his	completing the application		Brian reads	s q aloud	Selden leans	He reads this and then	Brian: How many hours are you												
	knowledge of bar work	form/meeting targets		for Selden			recasts, using rhetorical	available to work? And on which												
				Brian traces words at screen		questions and open	daystimes of the week?													
	Selden's discourse –			on screen with					gestures and body											
	personal safety, well-			finger			position to establish													
	being						permission in a non face	Principal de la contra de la contra de												
	JK's discourse- same		Your Application	Brian turns Selden	to face	Selden looks at	threatening way.	Brian: What's best time for you? Worth												
			Come	Selden		screen Selden glances		worth												
			They want you blood to have be and they want			at Brian														
						directly														
				Selden sha	kes head	directly	JK exclaims loudly in a	Brian: Shall we put both days and												
			THE REAL PROPERTY OF STREET, ST				disapproving tone, while	nights? Flexible?												
						Brian is doing this.	Selden: Night not no													
00:07:23.8			-	Brian leans	towards	Selden faces	-	Brian: D'you know flexible? D'you know												
				Selden		forward and		what flexible means?												
						leans both														
				L		arms on desk														
07:30				Brian	JK	Selden turns to		Brian: Flexible hours? Means you can												
				leans	exclaims	Brian		work any time between 11 till eleven o												
				back	loudly			clock at nightyeah?												
				Brian gestures				JK: Long time!												
				with				JK: Long times												
				hands				Brian: yeah?												
				nunus		Selden nods		Selden: yeah												
		completing the application		Brian smile	s. nods	JK talks audibly		Brian: Flexible												
		form		and turns t	o face	to himself and		Selden: Mmm												
				screen		grumbles in		JK: long time nay()												
				Brian reach	nes for	own language														
				mouse																
		Looking after his wife		JK calls over to Selden		JK calls over very loudly in	JK: Nay Selden nay Flexible!													
							a warning voice	(own language) flexible!												
	Brian's interpretation	completing the application			o of mouse	e and puts hands	Brian does this in an	Brian: Flexible hours?												
	related to his	form		on knees	fully record	d to form IV	exaggerated way													
07:42	knowledge of bar work [more understanding of	completing the application		Brian turns Brian turns		d to face JK JK laughs	JK backs down from his	JK: He he he he ah												
07:4Z	the work the text needs	form				loudly	overt interruption	JK. HE US US US US an												
	to dol	Looking after his wife		screen with a nod		screen with a nod		screen with a hod		screen with a nod		screen with a nod		screen with a nod		screen with a nod		loudiy	overcinterruption	
	JK's discourse related	coording arter into mile																		
07:47	to prioritising his wife's	completing the application		Selden	Brian tall	ks JK talks to		JK:(inaudible, own language)												
	well-being [not aware	form/ Looking after his wife		leans	as he typ		JK's tone is grumbling and	Brian: Flexible hours?												
				forward to		his own	disapproving, not joking.	Selden: huh												

FIGURE 6: Mind map for RQ based on 3 levels of activity (Bedny et al., 2000; Leontev 1981) and showing spaces of interaction (Jones, 2005)

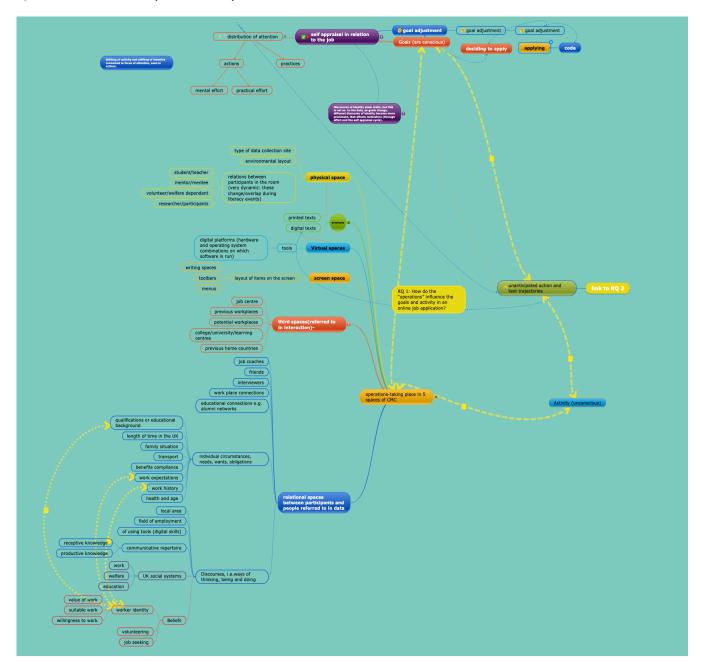


FIGURE 7: Participant seating at the computers for "Are you fit?"

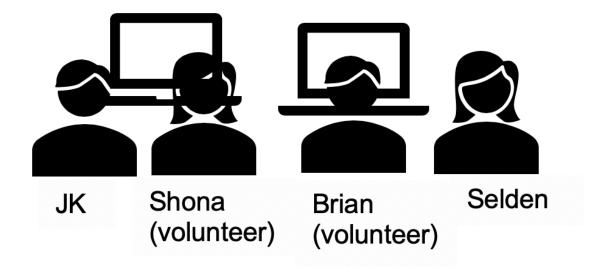


FIGURE 8: Shona re-entextualises the job advert for JK



Hoovering

Heavy machines



This one?



Strong man?



Keys

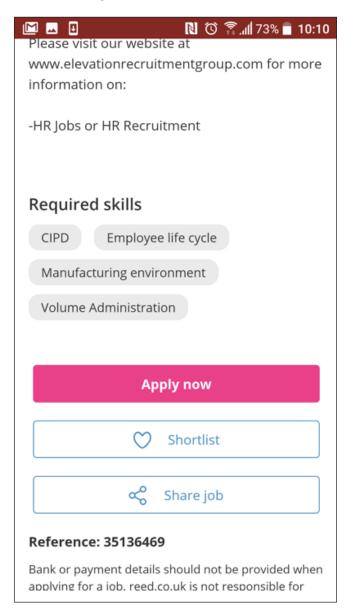






Phoning sick

FIGURE 9: required skills, listen in the advert



Report from the Field

Grandma Needs English, Too

Lynne Weintraub, Jones Library

Note: This material is based upon work supported by the U.S. Department of Homeland. Security under Grant Award Number 22CICET00272-01-00. The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security.

Abstract

Immigrants in their later years can succeed at learning English and becoming citizens if they have access to instruction that considers their particular interests and stage of development, including their distinct cognitive, physical, and psychological profiles. *Step One*, a new age-friendly curriculum, helps older newcomers take the first steps in speaking and understanding English, learning civics facts, and becoming familiar with the community around them.

Keywords: citizenship, older immigrants, beginning-level ESL, age-friendly instruction, cognitive challenges, responsive curriculum, life-long learning

When older immigrants arrive in the United States, it is a challenge for them to access beginning-level English language instruction that meets their needs. Instruction in federally-funded adult education programs and community colleges is designed for younger immigrants who are entering or attempting to improve their standing in the U.S. workforce. It tends to be fast-moving, academically (or vocationally) oriented, and heavily integrated with technology. Older learners are less likely to show rapid skill gains, earn workforce credentials, or demonstrate the career placements/advancements that programs must document in order to maintain continued funding, so they have little incentive to admit students who are retired or nearing the end of their working lives, and no rationale to adapt curriculum and classroom practices to make them accessible and effective for older learners.

Nevertheless, many older immigrants desire language instruction so that they can interact with their neighbors (and reduce the social isolation they often experience), understand health care practitioners, and participate in their new communities (Reder, 2020). Newcomers often express a desire to become U.S. citizens in order to vote, travel freely, sponsor relatives, and qualify for federal benefits. But citizenship preparation classes typically screen out students who test below the National Reporting System proficiency level three. How can older beginners access instruction that will get them from a prebeginning level to a high beginner level?

A New Age-Friendly Instructional Resource

In October of 2023, the adult literacy program I direct at Jones Library, Amherst, Massachusetts, was awarded an Innovations grant to address this challenge. This USCIS grant program funds projects aiming to help hard-to-reach immigrant populations integrate into their communities and ultimately attain citizenship. Over the course of a 2-year project, I have developed curriculum for pre-beginning older students, field tested it with my "older beginner" ESL class, and have started disseminating it to immigrant-serving programs nationwide. Draft versions of the new *Step One* curriculum units, teachers' guide, and program tools are available as free downloads at joneslibrary.org/step-one. I encourage programs to try them out and provide feedback to help me refine the final version.

Step One curriculum introduces practical oral communication skills and reinforces them with related literacy exercises. Beyond this, it teaches a subset of civics concepts and questions on the U.S. citizenship test that are suitable for beginners. A third goal is to familiarize students with the community. An implicit goal of the curriculum is to reduce social and linguistic isolation by providing students with a supportive, low-stress way of learning about and interacting with one another and with friendly visitors to the classroom. Students gain confidence as they succeed in asking and answering personal information questions and use social phrases (e.g., *nice to meet you, congratulations, see you later*) in authentic contexts.

Each instructional unit consists of a detailed set of instructions for presenting an oral communication-based lesson, accompanying visuals, and literacy worksheets. Units in the "Speaking English" section focus on daily life topics such as daily routines, families, health and wellbeing. Civics units introduce national holidays, geography, and simple government topics. "Life in the US" features activities such as local field trips and ways to familiarize students with U.S. customs and traditions. An accompanying teachers' guide explains the needs of older learners and provides strategies for tailoring instruction to meet these needs. Upon completing the Step One curriculum (up to a 2-year process), students are better able to access standard citizenship/ESL instruction with a tutor or in a class setting, and communicate basic needs/ ideas more independently.

The 11 pre-beginners in my "older beginner" class range in age from 55 to 83. They come from China, Vietnam, Tibet, Brazil, Cambodia, Bangladesh, and Russia, and all are retired. The class meets for 60 minutes 3 days a week, and students are offered one-to-one review sessions with volunteer tutors outside of class. Once students demonstrate proficiency in the *Step One* objectives, they transition into conventional ESL/citizenship curriculum with a tutor who has observed the class and can provide age-friendly instruction. However, students have been reluctant to leave behind the connections and support of a group setting, so eventually I hope to set up a "Step Two" classroom option for them. I have offered a version of my "older beginner" class at the library since 2018, and over time I have observed and researched the particular challenges that older language learners face. In this article I will share what I have learned, and the strategies that have been most effective in making instruction accessible to these students – strategies that I've incorporated into the *Step One* curriculum.

Adult educators know that the lesson content and strategies that work best with children in preschool or elementary settings are not suitable for adults. Why? Because adults, of course, are at a distinct developmental stage, and they need instruction that is tailored to their particular needs, interests, and learning styles. As people age, changes in their physical, cognitive, psychological and social profiles lead to another distinct stage of development, and this includes a different set of strengths and challenges than those of younger adults. I find that seniors learn more effectively when they receive content and instructional strategies that are suited to their particular developmental stage, rather than being forced to "sink or swim" in fast-moving classes that focus on the needs of working-age adults (Weintraub, 2022). As I describe characteristics of older learners, keep in mind some important factors. First, not every student will exhibit the same characteristics, but the older the student is, the more likely it is that she/he will need modifications to optimize learning. Second, those with the lowest levels of formal education are likely to need more assistance in accessing instruction. Third, in addition to challenges, older learners bring a lifetime of experience and knowledge to the table, and many are proficient in several languages already. These strengths should be acknowledged and integrated into instruction (Weinstein-Shr, 1993). Finally, the strategies I describe can be effective in lowering barriers for students at any age and might be characterized simply as good teaching practice. My experience leads me to suggest a crucial distinction. Younger, more resilient students often manage to overcome barriers and make progress even when teachers fail to make these modifications. Older beginners (as well as pre-literate students, and those struggling with trauma/ disabilities) may find it impossible to access instruction without them.

Cognitive, Physical, and Psycho-Social Challenges

The most significant characteristics that instructors will encounter are age-related aspects of cognitive processing. Older adults tend to process information at a slower pace and need additional review in order to retain it effectively. Delivering instruction at a measured pace and presenting new information in careful stages will greatly improve retention. A few extra seconds of "wait time" can make a big difference in students' willingness to take risks, their ability to produce responses, and to develop confidence in speaking English. Since it can be difficult for older students to assimilate multiple pieces of information simultaneously, students need to practice each new skill or concept securely before they encounter the next one. I sometimes look back at a lesson to figure out why it failed to connect with students and realize that I had combined several new concepts into one activity. For example, I found that I could successfully teach the questions "Where are you from?" and "When did you come here?" but only if I introduced and rehearsed each question separately (generally on different days). Once I made this change, students could distinguish between the questions and respond appropriately.

Abstract information can be challenging for older learners (Speros, 2009), so the *Step One* curriculum is highly contextualized, centering on familiar topics: biographical information about the students themselves, their families, and their day-to-day lives (Kacetl & Klimava, 2021). New vocabulary is introduced primarily through visuals and body language. Civics topics are demonstrated using maps, calendars, and historical images. Older students can be easily thrown off by distractions (Speros, 2009), so I strive to eliminate any unnecessary teacher talk, interruptions, or background noise. Predictable routines seem to be more comfortable for students, so for example, when I go over homework, students can rely on me to call on them in the order in which they are seated.

A decline in working memory may develop with age, and this can present challenges for language learners (Kraiger, 2017). I provide more repetition and review in my older beginner class than I would in a typical ESL class. And I give students many chances to listen and indicate comprehension (with yes/no questions, "or" questions, or "show me the ---" commands) before I expect them to produce new words and phrases from memory. In literacy worksheets, if I present a completion task, I provide a "word box" at the top so students can find the word they need without having to spell it.

Older students face other physical challenges (Becker, 2012). For example, joint pain and decreased dexterity may affect students' handwriting, so when my lesson uses manipulatives I make sure they are easy to grasp, and my literacy activities/worksheets are not arduous in terms of handwriting. Occasionally I find that students need to update their eye glass prescriptions or be reminded to bring them to class. Classroom visuals are high contrast, often enlarged, and clear enough for everyone to see. My worksheets use 14-point black font, and incorporate plenty of white space, particularly between lines of text. Many older students experience a decline in auditory acuity and some use hearing aids. I make sure I am always facing students when I speak, and I enunciate clearly. When students are copying from the board, or looking down at their papers, I sometimes need to direct their attention to the person who is speaking. Aural messages are reinforced with visuals, gestures, and body language, and I encourage students to let me know when they cannot hear or understand something clearly. We practice ways to request that a speaker repeat, speak louder, or clarify a message.

The optimal classroom space for older students is one that is easy to find, near bathrooms and an elevator (if necessary), is well lit, has consistent temperature controls, and space to maneuver wheelchairs and walkers. If students have issues with vision or manual dexterity, a large white board is a necessity. I frequently look over my classroom space (and the path that students will take to get to it) to ensure there is nothing on the ground that students might slip on or stumble over. In terms of scheduling, several short sessions are generally better than one long one, because older students may find stamina a problem and have difficulty with prolonged concentration. Energy levels tend to be higher in the morning, so that is a good time to schedule class sessions. And in the event of inclement weather, my policy is to cancel a class rather than expose students to icy sidewalks or severe thunderstorms.

The social and linguistic isolation that older immigrants often face has implications for their physical as well as psychological wellbeing. Social isolation is associated with increased risk of heart disease, stroke, and dementia, and loneliness is associated with higher rates of depression, anxiety, and suicide. (Centers for Disease Control and Prevention, n.d.). An age-friendly ESL classroom can serve as a remedy for social isolation and the feelings of helplessness and depression that may accompany it. It can offer a warm, low-stress environment for students to make connections with one another, form a community of learners, and cheer one another on. I promote a supportive learning environment by fostering cooperation and enabling classmates to share simple aspects of one another's lives as part of the language-learning process. When students experience difficulty in class, I encourage their classmates to respond with assistance, and I ask veteran class members to mentor new arrivals, helping them to learn classroom routines and catch up with the group. Confidence-building is a key part of this effort. Students may start off convinced that they are too old to make much progress as language learners, and negative experiences with education in their home countries can magnify this belief. I offer a lot of praise, and encourage applause for each gain that students make, large or small. I make it clear that I believe in them, and I provide many opportunities to succeed in each class.

Homesickness, the death of one's contemporaries, health problems, and loss of personal/financial independence are demoralizing facts of life for many older immigrants, and depression is not uncommon in this demographic. At times, this may affect students' outlook and ability to concentrate. I do not gloss over these realities, but I try to make the classroom an environment where students feel safe to share events in their lives and respond to one another appropriately. For example, I teach simple phrases to express sympathy/condolences, and help the class generate get-well cards for classmates who are unable to participate due to illness or injury. Step One lessons provide students with language to describe how they feel from day to day and why. But we also turn our attention to topics that give us joy and distract from troubles for a few hours a week. For example, some units center on activities that students enjoy and skills that they take pride in. Many

culminate in the teacher pulling out collected photos of students' children and grandchildren, and having students practice the new content by answering questions about them. For example, students who have just learned vocabulary related to life skills such as cooking, riding a bike, and using a computer talk about which of these things their younger family members can do. They are also encouraged to show off their particular talents, by bringing in items or photos of something they have cooked, sewn, created or repaired.

Technology is not always a strong point for seniors, but I've seen many students using it to enjoy media and connect with loved ones in their home language. If students have smart phones, I encourage them to use translation apps to help them understand new vocabulary, and to convey important information to me (for example, why they will miss a class). To maximize time spent on listening activities, I discourage laborious copying from the board, and instead have students take a photo to review when they get home. There are times when I need to convey information to students (and vice versa) that is time sensitive and/or too complicated to teach in a lesson. Since I don't speak the home languages of my students, I stay in contact with a bilingual family member or friend of each one who can convey messages about things like weather cancellations or provide information that I can incorporate into lessons (for example when I teach vocabulary for occupations, I may include students' own former occupations and current occupations of their children.)

There's no question that instruction for older beginners can be time-consuming to prepare, and results take some time to achieve, but all of my students make gains (an average 128 points BEST Plus gain over 6 months) and two of my former "absolute beginners" have recently passed their US citizenship tests. It is rewarding to watch older newcomers become enthusiastic language learners, while enjoying one another's company, and making steady progress toward citizenship. By making the *Step One* curriculum available freely to interested immigrant-serving providers, I hope to extend this the opportunity to older learners far and wide.

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Forum: The Power of Equity and the Future of Adult Education

Introduction to the Forum

Jaye Jones, Lehman College - CUNY

What do well-compensated educators, the ability to engage with diverse cultural perspectives, and a commitment to nurturing spaces where the most marginalized can lead have in common? They are all building blocks for adult education programs that center equity while demonstrating their widespread economic and societal value.

In their pieces focusing on the need to address wage inequities (Cortes), deepen ties to DEI work (Hatten), and promote the benefits of an immigrant workforce (Pickett) in adult education, the authors featured in the forum build on the field's interconnectedness to showcase its broader importance. Cortes underscores how better wage equity and living wages can strengthen adult education's impact on social mobility, leading to economic benefits like increased funding and a less transient, more educated, diverse workforce. Such a trend has the potential to push against the concomitant backlash towards DEI work, outlined by Hatten, who laments that failing to prioritize racial and social justice has the potential to limit investment, diminish student access to critical services, and negatively impact the recruitment and retention of diverse personnel. Finally, Pickett's perspective provides a concrete example of how, by paying homage to their experiences, programs can both retain - and uplift immigrant staff and remove barriers to their leadership, illustrating how investing in programs, DEI, and creating a

sense of community can benefit the field.

The strategies provided by these authors are particularly beneficial at a time when there are questions about the value - in fiscal and societal terms - of educational efforts that celebrate our culturally diverse reality and the immigrants that revitalize many regions across the country. Structural, organizational, and programmatic commitments that center equity can expand the impact of adult education as students, families, and their communities reap benefits from policies that streamline access to high-quality, well-funded programs staffed by teachers who are valued for their expertise, perspectives, and unique histories.

As the field of adult education prepares for the potentially monumental policy changes that the new administration will usher in, these pieces by Cortes, Hatten, and Pickett are a clarion call - a roadmap for advocacy and sustained action. Programs may need to battle for their very existence, let alone pay equitable wages, all while they defend DEI against its erasure, and advocate for immigrant students and staff facing deportation and discrimination. In this moment of unpredictability, adult education risks being marginalized or subsumed by the broader sociopolitical landscape, making Hatten's call to "speak truth to power" essential for the field's continued relevance and survival.

Forum: The Power of Equity and the Future of Adult Education

(Part 1 of 3)

The Future of Adult Education: Enhancing Economic Growth Through Wage Equity

Maria Franco Cortes, LiterArteFusion

In today's ever-evolving job market, adult education serves as an indispensable bridge to work, equipping individuals with necessary skills and fostering lifelong learning. Despite its critical importance, the sector is challenged by significant wage inequities for its leaders, teachers, and other professionals that can impact the quality of instruction and sustainability of programs. Here, I explore the wage disparity in adult education from a business perspective, advocating for strategic investments and policy reforms to elevate the field's impact and effectiveness. Moreover, addressing wage inequities not only enhances the livelihoods of educators but may also bolster the overall effectiveness and reach of adult education programs, making them more attractive and sustainable long-term solutions for adult learners. The importance of resolving this issue cannot be overstated, as it can directly affect the economic opportunities and personal growth of countless individuals.

The wage gap in adult education often mirrors broader demographic inequities, where assumptions about lower pay for women and minorities prevail due to historical biases (Institute for Women's Policy Research, 2021). Addressing these assumptions involves not only advocating for fair wages but also implementing comprehensive policies that support diversity and inclusion within the field. By offering family-sustaining wages, the field of adult education can attract a more diverse pool of educators, including minorities who have historically been underrepresented in the field due to economic barriers (Harrison & Aguilera, 2024).

Promoting demographic equity in adult education enhances the relevance and reach of programs, ensuring that they effectively address the needs of a diverse learner population and reflect broader societal commitments to equity and justice. Moreover, by fostering a more inclusive environment, adult education programs can better serve all segments of the population, helping to ensure that every individual has the opportunity to achieve their educational and career goals. This inclusivity is essential for harnessing the full potential of the adult learning sector, as it broadens the scope and impact of educational services to reach underserved and marginalized groups effectively.

Demographics, Equity, and the Wage Gap

Adult education is a vital economic driver within society. However, as a career field, it suffers from a pronounced wage gap compared to other educational sectors as well as other social support services, particularly affecting its educators, reflecting broader societal and economic inequities (American Association of University Women, 2022; Pew Research Center, 2023). This undervaluation poses significant challenges in attracting and retaining skilled educators, thereby also detracting from the quality of education offered. Beyond the immediate effects on educators' livelihood, wage inequities can lead to increased turnover, impacting learners who may receive less consistent and lower-quality instruction thus duplicating the issues that often affected the adult learners' previous educational experiences and undermining the potential of adult education to contribute effectively to workforce development and societal advancement.

Wage disparities in adult education can significantly impact its ability to attract and retain skilled educators and thus the field's sustainability. According to Zippia (2022), the average salary for adult education teachers in the U.S. is \$41,280 annually. Women, who make up 67.4% of the workforce, earn 93 cents for every dollar earned by their male counterparts. Racial disparities also persist, with Asian educators earning the highest average salary at \$42,000, while Black educators earn the lowest at \$39,967.

The 2024 Wage Equity Survey (Harrison & Aguilera, 2024) targeted professionals within the adult education sector to explore wage disparities, career advancement barriers, and professional challenges. The survey sample included respondents from various demographic and experience levels, providing a comprehensive perspective on the systemic challenges faced in the field. 40.7% of respondents reported that adult learners employed in education programs are paid less than their peers in similar roles, reinforcing the perception of adult education as an underpaid sector (Harrison & Aguilera, 2024). Other key findings emphasize the need for mentorship programs and structured career pathways, particularly for newer entrants, as 27.8% of the workforce reported having only 1-5 years of experience (Harrison & Aguilera, 2024). These insights contextualize the broader issues contributing to wage inequities and their impact on the field's sustainability and emphasize the urgency of addressing wage inequities to create a more stable and effective workforce.

The Economic and Societal Value of Adult Education

Elevating the status and compensation of adult educators can lead to enhanced program stability and improved outcomes, which are critical for the socioeconomic integration of the diverse adult learners supported in adult education. This, in turn, contributes to closing the skills gap, enhancing social mobility, and creating a more inclusive and prosperous society for all. These changes could also help adult education programs better fulfill their potential as crucial contributors to national economic growth and societal well-being. From a business standpoint, the return on investment in adult education extends beyond direct educational outcomes to include broader economic and societal benefits. Wellcompensated staff support programs in operating more efficiently and effectively, allowing federal, state, and philanthropic monies to go further. Fair compensation improves job satisfaction, reduces turnover, and attracts more qualified instructors, thereby enhancing educational outcomes for learners (National Skills Coalition, 2020). A well-supported adult education sector can be a powerful

tool for economic development, enabling students to gain skills that match current market demands.

While most advocacy for adult education is rightfully focused on the economic gains realized by the learners, it is also important to uplift how better wage equity and living wages can positively affect the overall field. An increase in the number of teachers in adult education is also an economic advantage. Adult education perpetually has a significant number of job openings that go unfilled, leading to canceled classes or educators taking on more classes than they should, often with no change in pay. Recognizing this, stakeholders must advocate for policies that help ensure that funding and resources are allocated towards adult educators' pay to reflect the critical role that these educators play in societal growth. Supporting adult educators' pay thus represents an investment in the nation's future, facilitating a more adaptable and skilled workforce that can better meet the challenges of a rapidly changing global economy.

Impact of Wage Equity on Economic Growth

Investing in wage equity can catalyze what is known in economics as the "multiplier effect," where better-paid educators likely spend more within their communities, fostering local economic development and enhancing the societal impact of educational programs (Economic Policy Institute, 2021). Considering that most adult education programs are housed in locations that have been economically under-resourced, having better-paid teachers who can push money back into these locations is a double win.

For educators, equitable wages could provide greater financial stability, potentially reducing economic stress and enabling them to better focus on their teaching responsibilities. Additionally, higher wages may encourage educators to invest more in their own continuous professional development, which could contribute to enhanced teaching skills and potentially better outcomes for learners. The 2024 Wage Equity Survey (Harrison & Aguilera, 2024) highlights that many educators feel trapped in low-paying roles due to limited career advancement opportunities. It finds that 35.2% of respondents reported that experience in higher education does not translate into improved compensation and 50% of respondents believe further education or experience within the field does not lead to better pay, underscoring a disconnect between professional development and financial reward.

As a field, adult education has a varied web of training, often leading to educators needing to use external professional development as the main conduits for preparing to be an adult education teacher, upskilling, and becoming an excellent teacher. When provided with higher, more equitable wages, teachers will be able to be in more control of their training—allowing enactment of adult learning theory not only for learners, but for the educators themselves: adult learners should have control of their own learning, and it must be connected to specific personal outcomes.

This, in turn, could foster improvements in educational quality and economic vitality, suggesting that fair pay in adult education is not just an expense but a potential investment in community resilience and prosperity. This investment may also extend further to benefit programs. Moreover, when educators are adequately compensated, they are more likely to experience job satisfaction and remain in their positions longer, which could reduce recruitment and training costs, attract a wider pool of qualified candidates, and help ensure a more consistent educational experience for learners. Stable employment for educators can also contribute to local economic stability, as they are more likely to become long-term, active participants in their communities.

Challenges and Solutions for Funding and Departmental Prioritization

Securing dedicated funding for equitable wages in adult education requires overcoming departmental and bureaucratic hurdles that often prioritize other areas of education. The disconnect between funding streams and educational equity goals needs to be addressed through strategic departmental planning and policy advocacy (National Council of State Directors of Adult Education, 2022). To effectively challenge funding disparities, advocates must present compelling evidence of the return on investment from adequately funded adult education programs, using data and success stories to shift perceptions and influence policy at both local and national levels. Over the past decade most adult education systems and entities have aligned adult education initiatives with broader economic and workforce development goals. While this shift has partially helped in securing sustained and adequate funding from various sources, including government grants, private sector partnerships, and philanthropic contributions, it has not provided adequate funding, particularly not enough funding to allow programs and schools to increase adult educators' pay. For this more aligned approach to provide adequate educator pay, the field requires a coordinated effort among educators, advocates, policymakers, and industry leaders to reframe adult education as a pivotal element of economic strategies rather than a peripheral social service. We must also focus more efforts on supporting the adult educators as a major part of the advocacy ensuring adult educators have fair family-sustaining pay, consistent work schedules, and other work benefits. Adult ed must begin to be intentional about increasing funding for the purpose of increased wages.

Call to Action

The path to enhancing the stature and effectiveness of adult education lies in addressing the wage inequities within the varying levels of the field that undermine its potential. Educators, policymakers, and community leaders must collaborate to foster an environment where adult education is both valued and well-compensated. By advocating for and implementing strategic investments and policy reforms, we can contribute to securing a brighter, more equitable future for adult education. Ultimately, these efforts will not only help resolve economic disparities but also strengthen the educational infrastructure, benefiting individuals and communities alike. It is imperative for all involved to recognize the transformative potential of adult education, which is currently being stalled due, in part, to the below average wages of adult educators. Diligent work is needed towards ensuring its success and sustainability by ensuring that adult educators, who are critical to the success of adult education have a sustainable career path with livable wages that also show respect for their input and support of our larger economy. As we look to the future, the integration of adult education within broader economic and social frameworks remains a key strategy for fostering sustainable economic growth and building a more equitable society.

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Forum: The Power of Equity and the Future of Adult Education

(Part 2 of 3)

Adult Education DEI Champions: It's Time to Take Our Seat. Remain. And Speak Truth To Power!

Adriennie Y. Hatten, A.Y. Hatten & Associates

Any conversation that is intended to focus on creating an equitable adult education system must address the concept of resistance (or backlash) to the value for achieving diversity, equity, and inclusion (DEI) that ebbs and flows in our society. Some resistance to conversations that address diversity, equity, and inclusion is fueled by decisions of policy makers, including the Supreme Court of the United States of America, which denied the use of race as a status or category in admissions decisions in June 2023 (Walsh, 2023). Resistance is also fueled by the limited media attention to events that, if covered, would continue to put the evils of racism front and center in the minds of all, even for those who often do not have to recognize or acknowledge it. People's perception of racial equity can easily be skewed, as noted by Gause et al. (2023) when they explored the intersection of race and media portrayal in the context of protest movements. The core finding is that protests led by people of color were more likely to be depicted using language that evokes fear and anger, perpetuating a stereotype of threat.

It is important for adult educators to take the lead in assuring that appropriate policies and protocols are in place to promote diversity, equity, and inclusion in educational settings. Students achieve at higher rates when those who support their academic endeavors both believe in them and have similar lived experiences (Hines & Hines, 2020). Black, Indigenous, and People of Color (BIPOC) educators can serve as both role models and supporters of students' academic and professional achievements. They can also support their colleagues in understanding the experiences of students who have similar cultural backgrounds as theirs, an important duty that should not be placed on the students (Harrison, 2021). This is why it is necessary for adult educators who are DEI champions to hold a seat at the table where policy and resource decisions are being made - your invitation is your passion and your experience - stand on that, or rather take your seat on that!

It should be no surprise that there would eventually be increased push back on racial equity and justice if those who are asking for it continue to be depicted as a threat. Bias against the importance of the principles of DEI is divisive even when the practices are helpful to all. Diversity refers simply to the differences and commonalities between people. If you have more than one person in a room, I guarantee they will have similarities and differences in their backgrounds, lived experience, or along other dimensions of diversity. Equity assures that all have access to the opportunities and resources needed to achieve the desired goal. Equity cannot be attained unless there are effective communication processes in place to identify both goals and needs. Inclusion means creating environments that value and appreciate the diversity that exists amongst the target population or people in any given "space." Ultimately, a skewed public opinion and the power bestowed on individual leaders in adult education can promote resistance to DEI efforts that inhibit the supports and resources needed to assist adult educators in effectively meeting the needs of their diverse groups of students. I contend this is the reason that those of us who understand the imperative of DEI within adult education must Take Our Seat. Remain. And Speak Truth to Power!

The refusal to address the structural and systemic racism that has continued to plague the ability of our society

to achieve optimal performance is a decision to ignore the reality that we do not currently live in a just society. Adult educators operate at the unique juncture where our students bear the burden of America's systemic and structural inequalities and bring into our programs their expectations to receive relief and corrective actions to overcome those barriers. Thus, it can be argued that adult educators, leaders, and advocates are at the forefront of social and racial justice and must resist efforts against equity and inclusion by remaining present at every table where decisions are being made to ensure that these decisions are to the benefit of those they seek to serve - their students and at times even themselves and their colleagues!

After the murder of George Floyd in 2020, many organizations and individuals that make up the American workplace began to issue statements proclaiming racism causes many harms and is a public health crisis (Bellware, 2020). Michigan was the first state to make this public declaration on August 5, 2020 (Yearby et al., 2020). Organizations began to foster conversations and hire leaders and consultants to develop strategic approaches towards becoming a just society and eradicating racism. Unfortunately, by mid-to late 2023, the misnomer that we are a post-racial society began to re-circulate with the underlying assertion that there was no longer a need to address diversity, equity, or inclusion because somehow America had "arrived" and no longer needed to address individual or structural racism. By preemptively claiming to be or having completed the work needed to become a post-racial society, America found itself once again at risk of repeating the destructive cycle of prematurely dismissing the long-standing influences of systemic racism on individuals in need of adult education services. While many knew that there was still much work to be done to assure that all people could have their needs met, others began to believe that we, too, had "done enough."

As a result, some organizations began to abandon DEI strategic planning processes (Park, n.d.) that were more than 2 years in the making, disappointing staff who had been actively engaged in equity-based efforts. Staff who were anxiously awaiting implementation of goals and strategies to craft new, robust DEI vision statements were left waiting. Staff who had designed hands-on training sessions on establishing inclusive workspaces where all could flourish and who had developed robust DEI objectives and realistic timeframes now saw DEI initiatives abandoned mid-stream and needed funding abruptly rerouted to other initiatives. Staff who had volunteered to serve on newly formed DEI committees, employee resource groups, etc. began to face real concerns that their work would not be respected and, worse, could be prematurely ended.

This cannot become the path in adult education. We must all continue to do the work of ensuring the adult education leaders and advocates understand that DEI principles are more than simply increasing the number of people of color hired. It also includes:

- Creating an environment of trust, which is crucial for fostering open communication, collaboration, and employee engagement.
- Shifting and reducing unequal power dynamics, which support staff in cross-departmental engagement, innovation, and in investing in the growth of the organization.
- Improving problem-solving because diverse teams are better at solving problems than homogeneous teams as they have a wider range of perspectives and experiences.
- Enhancing employee engagement by cultivating a feeling among staff of respect and value leading to better engagement and contribution to the organization's success.
- Reducing turnover by implementing strong DEI policies and practices because employees will feel more appreciated and supported.

Workplaces that consider the needs of their staff value the importance of creating inclusive workplaces that allow their team members to bring their authentic selves into a space where they feel valued and respected, and ratcheting back these initiatives affects us all! Adult educators and leaders must put a stop to dismantling organizational structures that support our learners and that assure accountability to efforts that help each individual learner achieve their personal and professional goals. We adult educators and allies must step forward when transparency, authentic engagement, data-driven innovation, and inclusion are replaced with silence and misaligned objectives. We must not stand by and allow important voices to be silenced when making key decisions. This significantly hinders effective decision making and the adequate allocation of resources. Within the adult education field this move in the wrong direction increases the likelihood that policy and procedural barriers that keep lower income and minority adults from achieving their academic, career, and community goals. When this happens, programs may see a decrease in their ability to allocate financial resources that provide much needed wraparound services such as basic needs or funding to ensure learners stay gainfully employed while participating in their programs.

The importance of drawing on the lived experiences of adult education students as the basis for policy and financial decisions to ensure that challenges are continuously met with relevant and viable solutions is too important to abandon and must continue. Adult educators cannot allow inclusive practices like this to slip away. We must not allow all of the gains we have made in successfully educating diverse adult learners to become a thing of the past as many other social justice movements have. Even worse, we must not allow all of this work to become a figment of our collective imaginations. If we allow this backtracking to succeed, we may make it more difficult for BIPOC who have only recently been able to safely sit in rooms with or as members of the C-suite and leadership teams to get the resources we understand that they need. Veering away from an equityfocused workplace means that non-BIPOC people who have embraced DEI concepts will now be forced to deal with the frustration of losing the gains that they, too, experienced from efforts that emphasize DEI.

Any misguided efforts to either erase the importance of addressing diversity, equity, or inclusion in the adult education sector or resist the presence of advocates for DEI approaches that positively impact the beneficiaries, has the power to hinder progress that we (mostly) all had agreed can provide great outcomes for all. Now, we face a decision to accept or reject what the resistance to DEI efforts or failures to complete substantive DEIrelated initiatives might lead to. These include less inclusive learning opportunities, lower economic uplift, and significant barriers for individuals, families on local, national, even global levels of society. The possibility of not achieving desirable equitable outcomes for all creates the necessity for adult educators, who see the most benefit of DEI and the harm from its absence in policies and procedures that impact adult learners, to Resist the Resistance to dismantle DEI initiatives or undercut their potential to succeed. DEI principles and practices are integral to our work improving the lives of our learners!

Ways for Adult Educators to Take Our Seat. Remain. And Speak Truth to Power

Resist Imposter Syndrome

Adult educators and their learners need to spearhead DEI and resist the resistance, even if others at the table do not realize it and may even try to discourage them. However, their success does not require appreciation, only respect. Adult educators should focus on measurable outcomes and emphasize our country's past decisions that excluded diverse voices, leading to ongoing challenges in achieving desired outcomes for all.

In this same vein, adult educators who champion DEI principles should avoid imposter syndrome which is the feeling that they:

- do not belong where they already are
- must continue to ask permission to be where they are
- must always be proving that they deserve to be there

Serve on Committees: Adult educators should be leaders who help advocate for students. They should push to open criteria for membership on committees in adult education organizations. This includes seeking input from newer staff who should be included on key decisions. Also, it is important to start discussions and create forums for sharing ideas and experiences that can be collected and fashioned into inclusive solutions.

Initiate Research and Write: The larger society and the adult education system needs to better understand adult learners so that their needs are better attended to. Storytelling is a key component of qualitative research and is needed to expand the knowledge base that will create inclusive and equitable policies and practices that benefit adult learners.

Stay Informed: Adult educators should keep up to date on DEI trends and best practices. They should attend conferences, webinars, and workshops to expand their knowledge and skills. They should not assume the work that they have done is enough, there is always more to do. Also, BIPOC adult educators should remember that they also need DEI trainings to ensure that they are not contributing to unjust workplaces, policies, nor giving reason for DEI initiatives to be squashed.

Ways to ensure DEI Innovation Remain at the Workplace

Engage Leadership: DEI initiatives are more likely to be successful when they have the support of top leadership. Adult educators should work to ensure that organizations' leaders are committed to DEI and are willing to invest the necessary resources. If they have already shown that they are willing to invest in DEI they should still be reminded of DEI principles in meetings and at key decision points.

Advocate for Resources: Those committed to DEI should push for adequate funding and support for DEI initiatives. This includes professional development for staff, culturally responsive curriculum, and resources for underrepresented students.

Build Alliances: Adult educators should connect with colleagues or organizations who share a commitment

to DEI. They should collaborate on initiatives, share resources, and support each other's efforts. There is strength in numbers. Also once established, others should be invited who may not be as committed but are not resistant; many times, people or organizations that are unsure about DEI need a peer or near peer to help them see the positive outcomes.

Celebrate Diversity: Adult educations can work to ensure that their organization highlights the diverse backgrounds and experiences of adult educators and learners. Their successes and contributions to the workplace and community should be showcased. It is important to balance the types of images and stories used; do not only use the most sad, scary or other stereotypical story. Stories should be as diverse as people are.

By using these recommendations, adult educators can play a vital role in ensuring that DEI remains a priority in workplaces and across the entire field. We are small but mighty, and the outcomes that we work towards are bolstered by the work of DEI. Yet, this work will help create a more inclusive and equitable environment for all learners, educators, staff, and leaders regardless of their background or circumstances.

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Forum: The Power of Equity and the Future of Adult Education

(Part 3 of 3)

Empowering Communities Through Diversity: How To Hire Multilingual and Immigrant Staff To Transform Adult Education

Lori Pickett, Alaska Literacy Program

Alaska Literacy Program (ALP), for the last 50 years, has served as a volunteer-based organization committed to English literacy for adult learners. Since our beginnings, these classes have broadened to include digital, family, and financial literacy, programming dedicated to helping people navigate health information, GED services, and citizenship courses. Our organization thrives on a commitment to care and effective communication, values embodied by our diverse, multilingual staff who intimately understand the needs of our immigrant community. Our staff represents 13 different languages, including English, Spanish, Russian, Ukrainian, French, Nuer, Italian, Portuguese, Japanese, Emakhuwa, Swahili, Lingala, and Tshilubà. Hiring individuals who not only speak the languages of our students but also bring invaluable lived experiences is the foundation of ALP.

By supporting and valuing immigrant staff, our organization has grown into a trusted cornerstone of our community. We know that tapping into the skills, experiences, and perspectives of immigrant staff can significantly enhance organizational services and build more resilient communities. To effectively hire and retain immigrant staff, we have found success by tailoring our interview process, having clear communication, and having specific thoughtful retention practices.

The job interview is the first step in evaluating how your company can attract more multilingual and immigrant staff. Before the interview, invite applicants to tour the building so that they may meet staff and gain a deeper understanding of the organization's mission. Ensure that all of your applicants have access to the questions they are being asked ahead of time and make a practice of publicly sharing the wage range for the role. This allows for ample time in translating materials, clarifying any questions that may arise about what the interview is asking and will ensure all applicants have decided that the salary range is what they expect or can accept. Creating a "gotcha" environment that is more typical to our corporate culture in the United States is counterproductive to building a multicultural and multilingual staff. By making the hiring process clear and accessible, you can attract a greater pool of applicants from all experience levels.

Additionally, tailor your hiring process so that lived experience can inform the hiring decision as much as resume listed job experience. Multilingualism is far more prevalent outside the United States. In a setting such as adult education, teaching students from across a global network of countries English, this is valued as having the ability to relate to students of a new language and communicate with a multilingual speaker. Beyond language skills, multilingualism is a testament to the critical thinking, attention to detail, and memory skills that come with learning a new language. By recognizing these skills as highly transferable to any workplace environment, you will be able to find additions to your workforce that reach beyond job experience.

Once you begin to build a staff that is both multilingual and multicultural, do not be afraid to lean on your connections to continue the trend; leverage your connections to sustain this diversity. We have found success in identifying former students who would excel in an open position or asking staff if they have anyone they recommend for the job. This allows us to interview and hire staff who would not have otherwise applied for the job. By tapping into your network, your organization can connect with a broader pool of talent who are already embedded in the community and understand its unique needs. This approach not only helps in finding qualified staff but also strengthens community ties and fosters a more inclusive work environment. Plus, it allows for more collaboration for staff to join in building your organization.

Equally important to hiring your team is the retention of staff. Communication is, first and foremost, the most important tool to ensure the retention and success of your staff. Using plain language and taking extra time to ensure your messaging is clear and effective will ensure that everyone is welcome in every conversation. Avoid jargon and complex phrases that might lead to misunderstandings. For us, this manifests in reading student policies and job descriptions at staff meetings, where all staff members are able to hear our messaging and flag pieces that require adjustment. By prioritizing effective communication, you can ensure that all staff members, regardless of their English proficiency, are able to fully engage with their roles and responsibilities.

Retaining immigrant staff involves creating a culture of support and recognition across your organization. As an organization, your team needs to treat mistakes as learning opportunities rather than reasons for criticism. Building open lines of communication and opportunities for one-on-one meetings to offer constructive feedback will not only improve the morale of your staff members but will also improve the talents and skills of your staff. As your staff spend more time at your organization, take the time to focus on understanding each employee's strengths. Building their roles around these strengths, rather than rigidly adhering to job descriptions will help employees feel valued and motivated. Holding space for public recognition of staff members who are successful in their work, whether that is in staff meetings or in events with the greater community is equally important.

As your staff grows into their role, create opportunities

for mentorship and professional development across your workforce. Allowing your staff the opportunity to continue learning in their role will enhance your organization's reach and will allow staff educational opportunities that benefit them personally and professionally. When possible, offer more flexible funding for special opportunities, recognizing that traditional funding sources may not cover all professional development needs. If you recognize a staff member that possesses skills that could transfer to a professional development opportunity, encourage them to use their expertise to teach others! Allow for creativity in what this could look like as well.

Lastly, it is important to accommodate the diverse needs of your staff by being flexible with holiday leave, providing food at meetings, and understanding that some staff may need longer trips to visit family. Build services and policies around these needs to create a supportive work environment. Emphasize a top-down approach to inclusivity, starting from the executive level and extending to middle management. Ensure all staff members have the opportunity to provide input and actively involve them in decision-making processes.

For us, the decision to prioritize immigrant staff isn't just aligned with our organizational values; it enhances our services. By harnessing the skills, experiences, and perspectives of immigrants, we not only improve our programming but also contribute to the resilience and strength of our communities. Embracing diversity, particularly through immigrant employment, fosters a stronger, more interconnected community-a testament to the transformative power of inclusivity and shared experience. In embracing immigrant staff, we not only enrich our organization but also champion a more inclusive future—one where diversity isn't just celebrated but actively nurtured for the benefit of all. We invite others to join us in this important work as we harness the greatness in us all to uplift and strengthen adult education as a field.

Research Digest

The Dangers of Low Literacy for American Democracy: The Promising Role of Public Institutions as Community Conveners

Kristy Roschke and Tara Bartlett, Arizona State University

For nearly a decade, concerns about misinformation influencing U.S. elections have grown. As modern elections are increasingly characterized by overwhelming amounts of information, trust in the media is at an all-time low, with people across the political spectrum reporting low confidence in the mass media's ability to report the news "fully, accurately, and fairly" (Brenan, 2024, para. 8). Voters with high literacy can struggle to make sense of information online, and those with lower literacy may face even greater challenges. To prepare people to discern credible political information and make informed choices, we must find more opportunities to incorporate digital media literacy into basic adult literacy training.

For over 40 years, adults over 45 have voted at the highest rates, especially in smaller, off-cycle local races, with significant influence (Bunis, 2018; Fabina, 2021). At the same time, older adults are more likely to share misinformation on social media and often have difficulty determining the origins and reliability of political information (Brashier & Schacter, 2020). In contrast, younger voters, who adopted digital technologies earlier, trust platforms like TikTok and YouTube more than traditional outlets (Liedke, 2022). Younger voters are more likely to have formal digital literacy training, defined as "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills" (Welcome to ALA's Literacy Clearinghouse, n.d., n.p.), while older adults are mostly self-taught and consume more partisan media (Muise et al., 2022). This generational gap in media literacy can lead to varying interpretations of events, influenced by factors like political affiliation and education (Baptista & Gradim, 2022).

Navigating the voting process can also be challenging for adults with lower literacy levels. In 2022, Parker (2024) found that most ballot propositions were written above a high school reading level, while over half of U.S. adults have a literacy rate below the 6th-grade level (The National Literacy Institute, 2023). Digital platforms focusing on visual content, like TikTok and YouTube, are often more accessible sources of political information. And though news organizations, government agencies, and political candidates usually have a presence on these platforms, the personalities with the greatest engagement — and potentially the most influence — often do not have the expertise to warrant credibility. These factors can make navigating the civic duty of voting difficult, frustrating, and potentially dangerous.

Navigating the Digital Landscape

Research shows that people of all ages have trouble discerning the veracity of information online (Brashier & Schacter, 2020; Grinberg et al., 2019; McGrew et al., 2017) and that older adults are more likely to share information on social media without fact-checking it (Guess et al., 2019). Given the widespread concern about political misinformation, researchers and educators have tested and implemented a variety of media literacy interventions to help people use digital media with more confidence and skill. First among them is *pre-bunking* or implementing an intervention to correct misinformation before people encounter it. Pre-bunking works to build people's resilience to misinformation by seeding small amounts of information before a misleading narrative takes hold among a larger population, such as pre-emptively explaining how ballots are counted and why the process takes longer in some states before election day misinformation can spread (Roozenbeck & van der Linden, 2019). Pre-bunking can also take the form of sharing media literacy-related messages that prime people to apply critical thinking skills to content they see on social media (Hameleers, 2024).

Several studies have found pre-bunking effectively lessens misinformation's effects in experimental settings (Hameleers, 2024). For instance, researchers found that pre-bunking successfully countered COVID-19 vaccine misinformation among Canadians over the age of 50 (Vivion et al., 2022). One potential drawback is that the healthy skepticism honed through pre-bunking messages may lead to a deeper skepticism of credible information (Hameleers, 2024). Still, pre-bunking, spearheaded by technology companies like Google (Prebunking with Google), as well as by fact-checkers, educators, and other credible information providers, can be an effective and inclusive tactic for adult basic education and language learners.

Wineburg and McGrew (2019) examined what made different types of professional information consumers successful and found that fact-checkers used a technique called lateral reading to discern the credibility of online sources. With lateral reading, users read across the web by opening new browser tabs to find other evidence and perspectives when faced with an unknown website or source. Research has found that with direct instruction, lateral reading can be effective in helping users determine source credibility (Wineburg et al., 2022). Much of the research has been done with young people in school settings, though Fendt et al. found that among older participants "lateral reading may have increased participants' knowledge of news authors' identity, thus stimulating analytic processing, and enabled the participants to evaluate the information in a more differentiated manner" (2023, p. 8). The authors also found lateral reading training to be effective in both written and human training models, which further increases its utility for adult learners with different literacy levels.

Online games that offer media users an opportunity to practice media literacy techniques have been found to be effective alternatives to direct formal instruction. Glas et al. (2023) conducted a landscape analysis of media literacy-related games and found that 100 had been created between 2008 and 2023, with 20% of the sample explicitly related to combatting misinformation. For example, the *Bad News Game* teaches players how misinformation can spread by having them role-play as the misinformation peddler (Basol et al., 2020). Researchers in Korea found that their media literacy game *Facts, Please* was more effective in teaching online reasoning skills than a lecture-only and control group (Yang et al., 2024).

Integrating digital media literacy tactics into existing adult basic and English-language instruction helps to contextualize the skills by connecting daily activities to literacy instruction in a way that encourages participation (Yuan et al., 2019).

Opportunities for Adult Digital Media Literacy and Civic Engagement

The tactics discussed here align with much of what is being proposed for U.S. K12 schools in digital media literacy education. However, little policy traction and investment have been made in addressing media literacy shortcomings in adults. Greenberg (2008) describes the myriad challenges facing broader adult literacy programs and the context in which literacy can be taught, including technology skills. Public spaces like libraries have played a prominent role in filling a gap for adult digital media literacy training (Barrie et al., 2021), yet funding for resources and ongoing programming to keep up with trends and accelerating AI capabilities is limited.

Universities and other public service organizations are also instrumental in building digital media literacy for adults. Daniels et al. (2021) argue that higher education institutions have a moral duty to not only foster and guide knowledge but also provide resources and programming accessible to the broader community to construct guardrails and checks on power. The following are examples of successful informal learning programs at Arizona State University (ASU) that serve the broader public in navigating the current information era. These programs intend to convene communities to simultaneously boost digital media literacy and build resilience to political misinformation.

ASU News Co/Lab Mediactive

Ahead of the 2020 U.S. presidential election, the News Co/

Lab at ASU's Walter Cronkite School of Journalism and Mass Communication launched a free massive open online course (MOOC) and companion website called Mediactive. The course helps voters navigate the complex media environment to make informed choices. More than 3,500 people enrolled in the course, most of whom were older adults. Though the full course requires a certain level of technical and literacy skills, there are other ways to engage with the content. The website is an accessible introduction to digital media literacy skills. A Mediactive Facebook group brings together a community of interested learners, and course videos are available on the News Co/Lab's YouTube page. The course is also available in Spanish.

Collaboration with Osher Lifelong Learning Institutes

The Osher Lifelong Learning Institutes (OLLI, n.d.) is a network of 125 U.S. and college programs that support ongoing learning. The News Co/Lab collaborated with the ASU OLLI to bring the Mediactive training to its members. Putting tools in the hands of these lifelong learners empowered them to, in turn, be media literacy advocates in their own social circles. Media literacy instruction has been available online and in person at various public locations throughout the state. Instructors have also been invited to present online for OLLI groups outside Arizona.

The collaboration with OLLI also included intergenerational learning with ASU students. Older adults can feel selfconscious or discriminated against because of their low levels of digital media literacy (Barrie et al., 2021); intergenerational learning allows them to learn from digitally savvy young adults in a way that highlights mutual knowledge exchange. Likewise, the young trainers feel empowered as experts in the subject matter but recognize they have much to learn from the older participants (Pstross et al., 2017).

Arizona Town Hall

Arizona Town Hall has a long legacy of providing a deliberative forum to educate, engage, and empower communities to ideate solutions to complicated social issues. Arizona Town Hall works in close partnership with universities like Arizona State University, experts, and other organizations to create background reports to ensure participants are equipped with fact-based information to spark conversation and strive for consensus on policy recommendations and self-derived community solutions.

Town Hall participants range in demographic, political, and socioeconomic backgrounds. The in-person format is conducive for adults with low literacy levels, as the time is spent discussing a specific community issue in conjunction with the background report and one's lived experiences. Importantly, highlights of the background report are often synthesized and presented orally to participants via an expert panel or in smaller groups with a neutral facilitator. The rest of the Town Hall process entails participants discussing carefully crafted questions meant to evoke diverse, multi-partisan responses, followed by all participants contributing recommendations to address the community issue. Final reports are available online and shared with elected leaders, public libraries, and community organizations committed to advocating for change. Importantly, the Town Hall experience builds relationships, focuses on solutions, and combats misinformation through dialogue.

Conclusion

Universities and other community institutions have an important role in helping people navigate the onslaught of political information during election cycles and beyond. Learning experiences that foster critical thinking, dialogue, and fact-checking skills can better equip voters, specifically older adults and adults with lower levels of literacy, with the knowledge and skills to more objectively weigh information and positions on hot-button issues. By thinking beyond traditional for-credit classes, higher education institutions can provide a critical public service to community members without access to digital media literacy education. Doing so not only helps better prepare people of all ages to manage today's overwhelming information environment but also better positions higher education as an accessible lifelong journey. Acting as a community convener can help education institutions build trust - particularly among adults who have not participated in post-secondary education - while increasing opportunities for people to bridge divides in our highly partisan society.

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Review of Long-Term Success for Experienced Multilinguals

Kristine Kelly, ABE Teaching & Learning Advancement System (ATLAS), Hamline University

Long-Term Success for Experienced Multilinguals is focused on what the co-authors, Tan Huynh and Beth Skelton, call "long-term multilingual learners." These learners have developed proficient or near-proficient English for social purposes but lack the academic language

structures to demonstrate precise content learning in school. These students typically have not attained proficiency in academic English language within 5 years of being labeled as an English language learner. The authors remind the reader of the many assets multilingual students bring to the classroom, while providing a wealth of concrete examples to build academic language for thinking, speaking, and writing about contentarea concepts in ways that keep the heavy lifting on the learners. Though the target audience of this book is high school teachers of long-term multilingual learners, the instructional framework presented

and extensive examples of instructional scaffolds are relevant for adult basic education in the age of college and career readiness. The framework and accompanying scaffold examples are especially helpful for teachers working with adult learners in high school equivalency (HSE) classrooms or preparing adult learners for postsecondary options.

When multilingual learners advance from primarily

English language instruction into more content-focused instruction, there may be an assumption that these students already have the skills and language needed to process and demonstrate knowledge of content-area concepts. On the other hand—and equally problematic—



teachers may hold these learners to lower expectations or support them in ways that do not build capacity for academic independence. Huynh and Skelton highlight the importance of scaffolding these students. By doing so, they address the misconception that scaffolding reduces rigor by articulating that intentionally designed scaffolds help all learners to present and explain their thinking and understanding productively. Providing scaffolding in the typical adult basic education classroom reflects the Universal Design for Learning approach, a design that stresses equity for all. Many adult learners, even those who have grown up speaking

English, could benefit from the type of academic language support proposed in this book.

Huynh and Skelton advocate that "[a]chievement occurs by design, not by accident" (p. 89) and provide evidence of the successful outcomes of intentional scaffolding through the experiences of seven teachers from different content areas. The authors include some familiar scaffolding strategies, like activating background

Huynh, T., & Skelton, B. (2023). Long-Term Success for Experienced Multilinguals. Corwin. 264 pages. \$39.95 (paperback). ISBN: 9781071891278

knowledge and providing sentence starters for writing and speaking, but the authors also introduce fresh ideas. For example, rather than remove or replace difficult vocabulary, teachers can add an easier synonym behind the original word or phrase. If students need support to organize spoken and written responses about content, teachers can categorize word banks into nouns and verbs for greater accuracy of use.

To develop a clear understanding of where these intentional scaffolds can best serve learners, Huynh and Skelton lay out an instructional framework chapter by chapter that reflects a backward design approach: determine what learning students must demonstrate about content through a summative task, and then carefully plan lessons that build the skills and language learners need to complete the summative task successfully. Several subsequent steps of the instructional framework help guide teachers through identifying pertinent knowledge skills and academic language, making the content accessible to learners, and providing structures that help learners demonstrate their thinking and understanding with accuracy and precision. The reader may have an impulse to single out specific scaffolds presented with each step, but in following the steps sequentially and the framework in its entirety, there is a greater likelihood of cohesive instruction.

While scaffolding learners, the authors assert that having an asset-based mindset for long-term multilingual learners combined with a specific approach to designing contentarea instruction will result in a shift toward higher cognitive expectations, learner engagement with more complex texts, and increased practice with academic language structures when writing and speaking about content. Reversing any teacher deficit mindset reduces the likelihood of overscaffolding instruction, such as providing mainly rote memorization tasks or simplified— rather than authentic texts for learning. Consequently, learners can successfully engage with content at levels appropriate to their academic goals and employ higher levels of thinking.

In an effort to show how their framework and accompanying scaffolds work in real-life instruction, Huynh and Skelton weave the stories of two students throughout the book as they engage with content instruction developed around their framework. Also included are field experience reflections by both the authors and other teachers who discuss the effects of incorporating the framework into their instructional planning and collaboration with colleagues. Key points are summarized visually with easy-to-follow examples and templates. Huynh and Skelton integrate stopping points for the reader to try out each strategy and reflect on how the content of each chapter connects with current teaching practices, making the book a possible core resource for a community of practice or teacher team to use for professional development. For example, each stopping point is an opportunity for adult basic education teachers to discuss how the book's content is applicable to preparing adult learners for HSE testing or post-secondary transitions. Although the authors' suggestion of adopting this planning process schoolwide in the final chapter may be a stretch for most adult basic education programs, there is clearly value in collaboration among expert English language teachers and content-area teachers for the benefit of HSE learners.

Over 25 years of teaching HSE learners in adult basic education, I saw a large influx of multilingual learners who required more purposeful academic English support than I was trained to provide. This text and its meaningful framework, clear rationale and concrete examples, and useful templates for planning would have filled in a lot of my and my learners' gaps. Huynh and Skelton suggest that though all teachers do not have to be English language experts, content teachers do have a responsibility to ensure that learners are able to have access to the content they are teaching and to develop the skills needed to demonstrate content knowledge in ways that mirror authentic academic purposes and structures. It is not enough to teach the surface of content; we must be able to identify academic language demands early on in our content and accompanying tasks and target those language demands deliberately and thoughtfully for depth.

With often little time to plan instruction, intermittent learner attendance, and a sense of urgency to cover as much content as possible for HSE learners, the idea of implementing any sort of instructional planning framework or taking time to embed intentional scaffolds into every stage of instruction may seem overwhelming and unreachable. However, Hyunh and Skelton's book is a reminder to slow down and be intentional in how we teach adult learners in the HSE and college preparation classroom for maximum learner success.

Resource Review

Digital Alliance and Resilience in Texas (DART): A Foundational Digital Literacy ESL Curriculum

Lizelena Iglesias, Literacy Assistance Center, New York City



https://tcall.tamu.edu/dart-DL-ESL-Curriculum.html

The Digital Access and Resilience in Texas (DART) curriculum, which is freely available online, is a robust foundational resource that integrates English language learning with foundational digital skills. This curricular resource is an adaptation of the A-OK To Access curriculum developed for Tyson by the same authors. It is designed for beginning English learners (i.e., National Reporting System ESL levels 1-3), specifically for immigrants and refugees with no/low English literacy or familiarity with the Latin alphabet and with no or limited digital literacy skills.

DART was developed to offer the fundamental building blocks necessary for enhancing basic digital skills among English learners at lower proficiency levels. The curriculum covers all of the essentials that lower-level learners need to effectively create and log in and out of an online account. Since many learners rely solely on smartphones as their primary device, DART proposes using phones as the initial platform to teach keyboarding skills before students apply those skills to computers. Later lessons engage students in comparing and contrasting various elements of a Chrome window on both their computer and smartphone. DART sets out eight curriculum milestones, each of which addresses digital literacy and English language prerequisite skills. For example, the milestone **Identify digital scams in the form of email and text messages and web page pop-up windows and advertisements** requires students to use English to identify messages and advertisements that are scams and act (e.g., close the window and if need be, restart the computer). Seemingly prosaic, this activity combines ESOL instruction with real world situations that can make the curriculum more topical and engaging to the student. It is important to note, however, that DART is neither a stand-alone ESOL nor digital literacy curriculum. The authors recommend using it to supplement available digital literacy resources for lower-level English learners.

DART is easy to access and navigate. Users can explore the components of the curriculum online or download and print the whole editable resource. It is particularly useful to become familiar with DART online, allowing one to effortlessly access the basics of the curriculum including its milestones, lesson objectives, methods to differentiate

Rose, G., & Guckert, D. (n.d.). Digital Alliance and Resilience in Texas (DART): A Foundational Digital Literacy ESL Curriculum. Texas Center for the Advancement of Literacy and Learning. Available online and as a downloadable PDF. https://tcall.tamu.edu/dart-DL-ESL-Curriculum.html

to address learners' needs, and additional digital resources. The appendices provide a comprehensive understanding of the curriculum. For example, Appendix D is solely dedicated to vocabulary instruction and features a list of key

vocabulary for each lesson and is chock full of strategies for teaching vocabulary before and during a lesson.

The DART lessons are scaffolded effectively to integrate language development with digital literacy skills, ensuring learners simultaneously enhance their language skills while acquiring digital competencies. DART features 20 lessons addressing topics students need to know grouped into 10 categories: *Keyboard, Security, Parts of a Computer, Using a Computer, Going Online, Creating Accounts, Safety, Security, Troubleshooting, and a Final Review of Digital Skills*. This grouping of lessons makes it easy for teachers to use all 20 lessons or to identify individual lessons that best fit the purpose or audience.

DART's lesson plans follow a consistent structure. Each lesson begins with a succinct overview and clear learning objectives. There is then a list of materials and set-up instructions as well as instructional tips. Each lesson enumerates alignment to relevant standards, including the U.S. Department of Education English Language Proficiency Standards, CASAS Basic Skills Content Standards for Reading, Writing, Listening, and Speaking, and the Seattle Digital Equity Initiative Digital Skills. The vocabulary needed for each lesson is listed and methods to differentiate instruction to address learners' needs are spelled out. Easyto-follow steps, including needed links and media, make implementing the lesson effortless for teachers.

One of the most robust parts of this curriculum is the manner in which it follows the 5E instructional model developed by the Biological Science Curriculum Study. This is an inquiry-based lesson model which engages students in meaningful learning experiences, fostering critical thinking and long-term retention of information in five stages:

• Engage: The teacher captures students' attention and curiosity, presenting the topic in a relatable and intriguing way.

- Explore: Learners actively participate in hands-on activities, experiments, or discussions to discover concepts on their own.
- Explain: The teacher provides clear explanations and introduces formal concepts, building upon students' explorations.
- Elaborate: The instructor encourages learners to apply their newfound knowledge to real-world scenarios, promoting deeper understanding.
- Evaluate: Both the teacher and students assess learning outcomes through various assessments, such as tests or projects.

DART offers ESOL instructors effective instructional materials specifically focused on lower-level English learners. DART goes beyond simply navigating the internet. It offers well-crafted foundational real-world lessons focused on developing the digital and language skills needed to create and perform a login process, typing a website address into a browser, practicing basic digital security, identifying and avoiding suspicious emails and text messages, and becoming familiar with basic troubleshooting techniques.

Teachers who are looking for an effective resource that incorporates digital literacy while simultaneously developing language skills for beginning English learners will want to consider exploring DART. The DART lesson plans can be an excellent resource to augment existing curricular materials. Through its well-scaffolded and comprehensive learner-centered approach, DART has great potential to equip English learners with the essential digital literacy skills they need.

Since digital literacy obviously relies on access to technology tools and the internet, programs with limited resources may face challenges in fully implementing the DART curriculum. Accordingly, adapting the curriculum to different technological environments would require additional support and flexibility. Finally, while beginners are the intended audience for DART, it would be useful to expand the curriculum to address topics for higher-level English learners.

Technology and Adult Learning

Padlet: Enhancing Collaboration with Adult Learners

Vi Hawes, VH Ed Tech Consulting, LLC & Pima Community College

As educators continue to seek innovative tools that foster collaboration and engagement in the classroom, Padlet has emerged as a versatile and user-friendly platform. This interactive online tool functions as a virtual bulletin board, allowing users to post and share content in various formats, including text, images, videos, and links. Its intuitive design and collaborative features make it especially valuable in adult education, where fostering student participation and interaction is critical. The platform supports diverse pedagogical approaches, making it a versatile tool for adult educators aiming to enhance student participation and interaction in their courses (Ali, 2021; Nozaki, 2023; Phenwan, 2023). Recently, Padlet introduced a new feature called Sandbox, which offers an alternative to Google's Jamboard, a tool that is being phased out by the end of the year. In this column, I will explore how Padletand specifically its Sandbox feature—can address key teaching challenges in adult education.

FIGURE 1



What Is Padlet?

Padlet (padlet.com) is an online platform that enables educators to create virtual walls where students can post contributions such as text, images, videos, or links. These walls facilitate brainstorming sessions, collaborative projects, or reflective exercises. Padlet's adaptability to different learning styles makes it a valuable tool for adult education.

The Sandbox feature enhances Padlet's utility by replicating many of Jamboard's functionalities while allowing users to import existing Jamboard files without losing content or structure (Figure 1). For educators familiar with Jamboard, it is a digital whiteboard tool that supports real-time collaboration through sticky notes, drawing tools, and multimedia uploads. Sandbox retains these features while introducing additional capabilities unique to Padlet.

Sandbox vs. Jamboard

For those familiar with Jamboard, Sandbox offers several advantages:

- **Unlimited Walls:** Unlike Jamboard's limit of 20 boards per account, Sandbox allows unlimited walls in the paid version.
- Enhanced Customization: Sandbox supports richer formatting options for posts (e.g., colors and shapes) and allows integration of multimedia elements like videos or GIFs directly into the wall (Figure 2).

FIGURE 2



- **File Import Flexibility:** Educators can import existing Jamboards into Sandbox seamlessly while maintaining their layout and content.
- **Organization Tools:** Sandbox offers advanced organizational layouts like columns or grids, which are not available in Jamboard. These tools help educators keep content structured and accessible for learners.

Unique Collaboration Features in Sandbox

Sandbox also introduces innovative collaboration features that enhance its functionality in virtual and hybrid classrooms:

Breakout Room Integration: Educators can create multiple breakout links within Sandbox and share them with different groups in a video conferencing platform. Each group receives its copy of the Sandbox wall to work on independently. For example, during a professional development workshop, participants could be divided into breakout rooms to brainstorm solutions to specific workplace challenges. Each group's Sandbox copy allows them to collaborate privately while maintaining focus on their assigned task.

QR Code Sharing: To simplify access, Sandbox generates QR codes that students can scan with their devices to join a wall instantly. This feature is particularly useful in face-to-face settings where learners may not have immediate access to shared links. For example, during a classroom activity on financial literacy, an instructor could display a QR code on the projector screen, enabling students to quickly join and contribute ideas.

While Jamboard excels in simplicity and ease of use for quick brainstorming or sketching activities with its intuitive drawing tools, Sandbox surpasses it by offering more robust collaborative options and organizational flexibility.

How Padlet Addresses Teaching Challenges

The educational technology tool Padlet has emerged as a significant resource in addressing various teaching challenges in adult education. Its interactive and collaborative features facilitate active learning, which is particularly beneficial for adult learners who often bring diverse experiences and knowledge to the classroom. Padlet allows for a more engaging and participatory learning environment, which can enhance motivation and retention of information among adult learners (Bakar & Hashim, 2022; Etfita et al., 2022; Naamati-Schneider & Alt, 2023).

One of the primary challenges in adult education is fostering engagement and participation among learners. Some teachers may fail to accommodate the diverse needs and learning styles of adult students, leading to disengagement (Floyd, 2022). Padlet addresses this by providing a platform where learners can contribute to discussions, share resources, and collaborate on projects in real time. Moreover, Padlet supports the development of essential skills such as collaboration, critical thinking, and digital literacy, which are crucial for adult learners in today's job market (Gawin, 2021). The platform encourages collaborative learning by enabling students to work together on tasks and projects, thereby enhancing their ability to communicate and solve problems collectively. Additionally, the use of Padlet can help adult learners visualize their thoughts and organize information effectively - skills that are particularly beneficial in subjects requiring critical analysis and synthesis of information (Gawin, 2021; Ofianto, 2024).

Real-Life Applications of Padlet and Sandbox

Here are practical examples of how educators can use these tools in adult education:

- **1. Brainstorming Sessions:** In Sandbox, students can collaboratively brainstorm ideas for a group project by posting notes with their suggestions (Figure 3).
- 2. Concept Mapping: Using Sandbox's grid layout, students can create concept maps by dragging and dropping images or text boxes to connect related ideas. For example, in an ABE reading/writing class, learners could visually map out the writing process and define each step (Figure 4).

FIGURE 3

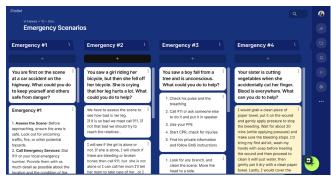
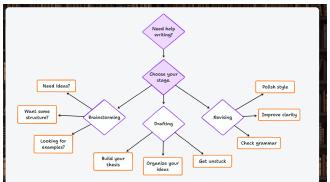


FIGURE 4



- **3. Interactive Reflections:** Educators can use Sandbox walls for reflective exercises by prompting students to share their thoughts on a topic of the lesson. A teacher might ask learners to post one thing they learned during a session on financial literacy and one question they still have.
- **4. Collaborative Problem-Solving:** In an ABE Math class, instructors could use Sandbox to present word problems where students collaboratively post solutions step-by-step using text boxes or drawings.

These examples highlight how Sandbox not only replicates but expands upon Jamboard's functionality by offering more organizational and multimedia integration.

Benefits of Using Padlet

One of the most significant advantages of Padlet is its ease of use, which allows both educators and students to quickly adapt without requiring extensive training (Nozaki, 2023). Educators can set up walls effortlessly while students find it intuitive to navigate and contribute their thoughts through various formats such as text or multimedia. This ease of use is particularly beneficial in adult education settings where learners may have varying levels of digital literacy.

Another key benefit is collaborative learning. The platform enables real-time interaction between students and educators through shared walls where participants can post ideas or resources simultaneously (Naamati-Schneider & Alt, 2023). This collaborative environment fosters peer-to-peer learning and helps build a sense of community within the classroom. In adult education– where many learners may feel isolated or disconnected, this sense of belonging can be crucial for engagement and retention.

Padlet also supports multiple input formats, making it highly adaptable to different learning styles. Whether students prefer writing text responses or sharing visual content like images or videos, Padlet accommodates these preferences seamlessly (Kim, 2023). This versatility ensures that learners with diverse strengths can engage with the material in ways that suit them best.

The introduction of the Sandbox feature further enhances Padlet's appeal by offering an alternative for educators transitioning from Google Jamboard. With Jamboard being discontinued at the end of the year, many teachers are searching for a tool that offers similar functionality. Sandbox not only replicates many of Jamboard's features but also allows users to import existing Jamboards into Padlet without losing content or structure. This seamless transition ensures that educators can continue using their established materials without disruption.

Finally, Padlet's ability to facilitate real-time interaction adds another layer of engagement for learners (Phenwan, 2023). Whether used during live classes or asynchronous activities, this immediacy helps maintain momentum in discussions and encourages spontaneous collaboration.

Challenges of Using Padlet

Despite its many strengths, Padlet has some limitations that educators must consider carefully before fully integrating it into their teaching practices. Below are key challenges along with strategies to address them:

1. Technical Issues

One notable drawback is the reliance on stable internet access. Learners in rural or underserved areas may face connectivity challenges, which can hinder their ability to participate consistently. For instance, during a collaborative brainstorming session, students with poor internet connections might experience delays in posting or viewing updates on the wall, leading to frustration. To mitigate this issue, educators can encourage students to prepare offline drafts of their contributions and upload them when they have access to a stable connection. Additionally, exporting Padlet walls as PDFs or images can ensure that students without consistent access still have access to the shared content.

2. Cluttered Walls

As more content is added over time-especially in larger classes-Padlet walls can become cluttered and difficult to navigate. This can overwhelm both students and instructors, reducing the tool's effectiveness. Some examples of organizational strategy can include categories or columns. Instruct students to post within designated columns or sections based on specific prompts or topics (e.g., separate columns for "Questions," "Reflections," and "Resources"). Setting post guidelines can limit the number of posts per student or require concise contributions to prevent overcrowding. Lastly, any old walls can be archived. Regularly archiving completed activities by exporting walls into PDFs or images for future reference while keeping active walls clean and focused can help with organization.

3. Limited Feedback Mechanisms

While Padlet excels at fostering collaboration, it lacks robust tools for providing detailed feedback on individual contributions (Nadeem, 2021). This limitation can make it difficult for instructors to assess student work beyond surface-level interactions. When using Padlet, pair it with other tools designed for grading or feedback, such as Google Classroom or Canvas. For example, after a brainstorming session on Padlet, an instructor could export the wall and provide individualized feedback through comments in a learning management system.

4. Cost Considerations

While Padlet offers a free version, its paid version unlocks advanced features such as unlimited walls and enhanced customization options. This cost may be prohibitive for some educators or institutions with tight budgets. A potential strategy includes educators maximizing the free version by reusing walls for multiple activities (e.g., clearing old content after exporting it) or collaborating with colleagues to share a single paid account for departmental use.

• Managing Collaboration at Scale

Effective collaboration management can be challenging in large classes or workshops, especially when multiple groups are working simultaneously on different tasks. Examples of collaborative strategies include using the breakout room integration mentioned previously. Sandbox allows educators to create unique links for each breakout group in video conference platforms like Zoom. Each group receives its own copy of the Sandbox wall to work on independently without interference from other groups. Another strategy to manage collaboration effectively is to take advantage of QR code sharing. Sandbox generates QR codes that students can scan to access their assigned walls instantly. This feature simplifies joining walls during in-person activities, such as group discussions or brainstorming sessions in hybrid classrooms.

Conclusion

Padlet offers a powerful solution for enhancing student engagement and collaboration in adult education. Its user-friendly interface and flexible format make it easy for educators to integrate into their teaching practices quickly. The recent addition of the Sandbox feature provides an excellent alternative for those transitioning from Google Jamboard by allowing them to import existing materials seamlessly while maintaining much of Jamboard's functionality. However, as with any tool, it's important not only to recognize its strengths but also to acknowledge potential limitations such as technical challenges related primarily to connectivity issues or difficulties managing large volumes of content effectively within shared spaces and online environments alike.

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ProLiteracy[®]

Call for Journal Editorial Team

ProLiteracy is currently accepting proposals for a new editorial team for the *Adult Literacy Education: The International Journal of Literacy, Language, and Numeracy.* The editorial team will be responsible for the editorial supervision and continuing intellectual development of a journal that provides scholarly leadership in the field of adult basic education and secondary education and transitions to college and career programs.

Candidates for the position must submit a proposal that contains the following:

- vita(e) with precise background information on editorial and publishing experiences for each member of their proposed editorial team;
- a statement regarding their projected goals for the Journal and the methods to be employed to achieve them;
- a plan and schedule for effecting the transition and selection of consulting editorial members; and
- a letter of support from an immediate supervisor and an appropriate fiscal representative of the institution. This letter should state with clarity and commitment all specifics relative to institutional support such as release time, editorial assistance, and technological support.

Proposals are due by March 31, 2025, and the decision will be announced by April 30, 2025. The three-year term for the new editorial team will begin July 1, 2025.

If you have questions or would like more information, please contact Lauren Osowski at losowski@proliteracy.org.