



# JOURNAL OF RESEARCH AND PRACTICE FOR ADULT LITERACY, SECONDARY, AND BASIC EDUCATION

Published Jointly by The Commission on Adult Basic Education and Rutgers University

## RESEARCH

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**Adult Transitions to Learning in the USA: What Do PIAAC Survey Results Tell Us?**

*By Margaret Becker Patterson and Usha G. Paulson*

**Computer-based GED Testing: Implications for Students, Programs, and Practitioners**

*By Karen E. Brinkley-Etzkorn and Terry T. Ishitani*

## PRACTITIONER PERSPECTIVE

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**Morphological Awareness Intervention: Improving Spelling, Vocabulary, and Reading**

**Comprehension for Adult Learners** *By Kathryn E. Bangs & Katherine S. Binder*

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### Advocacy

**The Politics of Adult Education** *By Art Ellison*

**New and Effective Approaches to Adult Basic Skills Advocacy** *By David J. Rosen*

**Student Leaders as Advocates** *By Regina Suitt*

**Placing Advocacy at the Heart of Adult Education** *By Jackie Taylor*

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**Development of an Evidence-based Reading Fluency Program for Adult**

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*Reviewed by C. Amelia Davis & Valerie K. Ambrose*

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**Staying Healthy for Beginners: An English Learner's Guide to Health Care and Healthy**

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*Reviewed by Jenifer B. Vanek*

## WEB SCAN

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**Websites for Assessing Writing** *By David J. Rosen*

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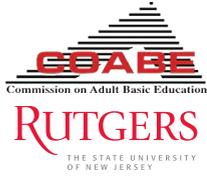
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# JOURNAL OF RESEARCH AND PRACTICE FOR ADULT LITERACY, SECONDARY, AND BASIC EDUCATION

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## THE COABE JOURNAL, CELEBRATING 36 YEARS AS A MAJOR VOICE IN ADULT EDUCATION

Dear Colleagues,

We are very pleased to introduce this issue of the journal at the beginning of our second year serving as the journal's editors. We are proud of what we have accomplished and glad to see the journal continuing to grow. In particular, we are pleased to have introduced two new features. The first is the Forum section, which focuses on current issues in the field. Our readers are encouraged to suggest topics or volunteer to participate in future forums. The second is the continuing publication of a selection of Program for the International Assessment of Adult Competencies (PIAAC) research papers that we believe are particularly relevant to our readers. We are pleased that both of these new elements are featured in the spring issue.

The first paper in this issue is our second PIAAC paper. In it, Margaret Patterson and Usha Paulson ask how adults continue to learn formally or non-formally and how this learning relates to education levels. This is important because it provides some interesting insights into the participation of learners in a variety of learning activities. It also explores their barriers and motivators for learning. The PIAAC data provide new opportunities for rich analyses because they offer more information and context than was available from previously conducted studies.

In the second article, Karen Brinkley-Etzkorn and Terry Ishitani examine the transition of the test of General Educational Development (GED) from paper and pencil to an online format. In particular, they describe how two programs adapted to the changes in the test from both teacher and student perspectives.

The third article in this issue written by practitioners Kathryn Bangs and Katherine Binder. Bangs and Binder weigh in on some of the arguments associated with how to teach reading to adults and they raise questions about how we can adapt research done with children to the needs of adults.

This issue also includes a forum discussion about advocacy. Given constant threats of flat or decreased funding, this is an issue that is perennially important to the field. The first article by Art Ellison lays out the importance of advocacy within a broader political framework. He goes on to indicate some of the basic steps involved in advocacy while emphasizing its importance to the adult education world. David Rosen continues this thread and points to some of the newer ways that advocacy can be accomplished in a media savvy world. Regina Suitt provides an example of the kinds of advocacy efforts conducted by her program in Pima County, Arizona. Finally, Jackie Taylor summarizes these disparate approaches and provides a blueprint for thinking about advocacy for the future.

As usual, we have outstanding columns and reviews in this issue. David Rosen's Web Scan column provides some websites for assessing writing which provides an excellent resource for teachers. We have included two book reviews in this issue. In the first, Cynthia Zafft reviews the latest installment in the *Staying Healthy* curriculum series published by the Florida Literacy Coalition. This much needed work is designed for English Speakers of Other Languages (ESOL) and Zafft cogently covers its strengths and weaknesses. Vanek reviews a second book, *Blended Learning for the Adult Education Classroom* by David Rosen and Carmine Stewart.

Finally, this issue's Research Digest article is written by Amelia Davis and Valerie Ambrose. They examine recent research on an evidence-based reading program by discussing its research design and its applicability for practitioners.

Sincerely,

Amy D. Rose  
Co-Editor

Alisa Belzer  
Co-Editor

Heather Brown  
Co-Editor



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## Adult Transitions to Learning in the USA: What Do PIAAC Survey Results Tell Us?

**Margaret Becker Patterson**

**Usha G. Paulson**

Research Allies for Lifelong Learning

This paper was commissioned by American Institutes for Research, funded through a contract with National Center for Education Statistics (NCES).

### Abstract

The Programme for the International Assessment of Adult Competencies (PIAAC) assessed literacy, numeracy, and technology-related skills of adults and found skill levels of US adults are well below the international average. In a world where advanced skills are requisite to workplace competitiveness, low skills are a danger sign. An initial PIAAC finding was that half of US adults do not complete a postsecondary degree. A question remains: do adults continue to learn purposefully—that is, either formally or non-formally—after leaving secondary settings, and how does learning relate to their education levels? A related purpose of the paper is to describe learning types that adults pursue. The paper also investigates barriers to and motivators for learning. Implications for adult educators are discussed.

OECD released initial findings from the Programme for the International Assessment of Adult Competencies (PIAAC) in 2013. PIAAC assessed literacy, numeracy, and technology-related skills of adults age 16 to 65 in 24 countries. According to PIAAC assessment data, skill levels of U.S. adults are well below international averages and vary substantially by education background. In a world where advanced skills are requisite to workplace competitiveness, low skills are a danger sign—particularly for adults who face economic challenges. Another initial PIAAC finding was that half of U.S. adults do not complete a postsecondary degree (Kis & Field, 2013).

Even so, adults do not necessarily stop learning (OECD, 2013). The first aim of this paper is to examine PIAAC data by asking: do adults continue to learn purposefully—that is, either formally or non-formally—after leaving secondary settings, and how does purposeful learning relate to their education levels? Addressing this question will identify the circumstances in which adults do or do not learn—

and insights into learning gaps with major economic implications.

Another aim of the paper is to describe learning types that adults pursue, such as gaining basic skills, postsecondary coursework, or on-the-job training. The paper also investigates barriers to learning that adults face and their motivators for learning. Implications for adult educators are discussed.

### Research Questions

Four research questions were developed for this paper:

1. How do Learners in each of three education level groups differ from Non-Learners, by demographic characteristics, skill levels, and educational and employment background?
2. What types of formal and non-formal learning do Learners report pursuing?
3. What barriers to learning do Learners and Non-Learners report?
4. What personal-interest and job-related motivators for learning do Learners and Non-Learners report?

### Literature Review

The literature on learning describes adult learners and offers definitions for formal and non-formal learning. We note situational, institutional, and dispositional barriers that can deter learning. We round out the review of literature by describing motivators for learning.

### Transitioning Adult Learners

Adult learners by definition partake of learning activities which promote “any sustained change in thinking, values, or behavior” (Cranton, 1992, p.3). Participation in adult learning in the past three decades has grown. Researchers cite social

and economic forces such as increases in women in the workforce, rapidly advancing technologies, and workplace change as main reasons (Autor, 2014; Ross-Gordon, 2011). Adult learners are diverse in age, gender, socioeconomic status (SES), and educational background (Hansman & Mott, 2010).

Participation in learning, however, has not grown evenly in adult subpopulations. Increasing numbers of learners at non-traditional ages (Patterson, Zhang, Song, & Guison-Dowdy, 2010; Ryu, 2010) and more women are participating in learning (NCES, 2006 and 2007). Early PIAAC findings noted skills gaps between older and younger adults and education attainment disparities by gender (OECD, 2013). More in-depth PIAAC analyses by age or gender can add to the knowledge base of adult learning participation.

Another indicator for disparity in learning is the connection of SES with assessed skill levels. “Large-scale national and international population surveys that include assessments of adult literacy typically report strong positive correlations among literacy proficiency, educational attainment, employment, and earnings” (Reder, 2013, p. 20). OECD (2013) cited low adult literacy and numeracy skills in explaining relatively weak U.S. performance on PIAAC assessments. Having basic skills is tied to economic productivity along with personal and social well-being (Reder, 2010).

A gap by SES may be widening. Autor (2014) notes that an earnings “inequality” between U.S. college and high school graduates has more than doubled in 30 years. Though entering employees with high skill levels earn more both initially and over time (Reder, 2010), those in poverty have least access to learning (Ginsberg & Wlodkowski, 2010). SES may sway high school dropout enrollment in postsecondary education (PSE) more than any other factor (Almeida, Johnson, & Steinberg, 2006).

Two types of settings are formal learning and non-formal learning (Merriam, Caffarella, &

Baumgartner, 2007). Skill levels vary widely in both settings. Approximately one-fourth of adults with less than a high school education showed the least participation in formal learning, including ABE (Hansman & Mott, 2010). In the Longitudinal Study of Adult Learning (LSAL), formal learning encouraged learning practices, particularly in adults with low skills (Reder, 2007; Reder, 2012). In contrast, most adult learners in PSE are women, married with children, or have high family incomes (Cook & King, 2004).

Adult learning is frequently job-related—that is, many adults learn to enhance job skills or career prospects, either in or outside the workplace (Ginsberg & Wlodkowski, 2010). Initial PIAAC data revealed that most adults with low skills are employed, so workplace learning may benefit career prospects (Kis & Field, 2013). However, participation in work-related courses is higher for adults with a bachelor degree than for those with a high school education or less (Hansman & Mott, 2010). Businesses tend to prioritize learning for key management and knowledge staff rather than low-skilled employees (Ginsberg & Wlodkowski, 2010).

Distance learning (DL), developed mainly to tackle deterrents such as time conflicts and remote geographical locations, can be formal or non-formal, and is increasingly online (Archer & Garrison, 2010). An advantage of DL is its potential to “allow workers to adapt learning to their lives” (Schleicher, 2013, p. 80). An estimated 12.2 million adults enrolled in DL for formal PSE (Parsad & Lewis, 2008), or approximately 20% of formal PSE learners by 2008 (Radford, 2011). DL participation was low (4%) among adults obtaining a GED credential; participants tended to be young, employed, and without disabilities (Prins, Drayton, & Gungor, 2010).

## **Barriers to Adult Learning**

Factors that typically play a pivotal role in adult learners’ participation or non-participation can be divided into three clusters: situational, institutional, and dispositional (Cross, 1981; Quigley, 2006). Situational barriers result from circumstances at a given point in time. Lack of child care or of support from close relatives, for example, can deter participation in learning (McAnaney, 2009; Patterson, 2014). Compared with male learners, female learners tend to be more frequently responsible for household tasks and caregiving and may lack support from partners (Spellman, 2007). Little academic preparation, overwhelming family responsibilities, limited finances, and social or cultural issues may prevent adult learners from enrolling in PSE (Reder, 2007; Research Allies for Lifelong Learning, 2013). Barriers from health conditions and learning or physical disabilities can also hamper enrollment in PSE (Patterson, 2014).

Institutional barriers occur when educational procedures, policies, or practices prevent or limit learner participation. Examples include lack of information, geographic inaccessibility, inconvenient course times, and prohibitive tuition rates. In PIAAC, Schleicher (2013) noted institutional barriers related to employer support for learning, especially for employees with low skills. Participating in PSE may never happen for adult learners who cannot navigate through enrollment, program selection, or financial aid processes to get started (Research Allies for Lifelong Learning, 2013). First-generation and immigrant PSE learners may have to deal with cultural stereotypes, immigration problems, and language barriers (Spellman, 2007). Currently, researchers have limited knowledge of adults not participating in learning, who are seldom included in studies of barriers to ABE or PSE (Hansman and Mott, 2010; Quigley, 2006).

Dispositional barriers refer to learners' self-perceptions and attitudes about failure in learning. Examples include low confidence, negative past experiences, or fear of being "too old" to participate (Patterson, et al., 2010). All three clusters of barriers provide disincentives to learning.

### **Motivators for Adult Learning**

Motivators to learn include career-related incentives and personal goals. For adult learners, "learning needs to be relevant" to daily tasks, whether at work or elsewhere (Quigley, 2006, p.121). If adult learners see how learning translates into securing better jobs, higher salaries, or promotions, learning becomes relevant (Schleicher, 2013). Triggers to start PSE are frequently work-related; some are inspired by other people's career roles (Quigley, Patterson & Zhang, 2011). Early PIAAC findings point to a connection between learning and employee mobility that deserves further analysis (Schleicher, 2013).

Adults also learn for diverse personal reasons. Feelings of self-worth and self-esteem are key motivators for adult learners in ABE, ESL, and GED preparation (Hansman & Mott, 2010). For people with disabilities, gaining self-determination skills has been shown to influence success in ABE and PSE (Rocco & Fornes, 2010). Learning is also positively associated with health and social outcomes (OECD, 2013). These important connections have yet to be investigated in PIAAC data.

### **Methodology**

Our approach involved secondary analysis of PIAAC-USA data files. Public-use files we accessed contain data from an extensive Background Questionnaire (BQ) and assessments in literacy, numeracy, and problem-solving in technology-rich environments (PSTRE). Our analyses include cross-tabulating BQ survey data and calculating means of

assessment scores. We describe participants overall and offer definitions for subgroups to which we refer in analyses.

### **PIAAC Sampling**

PIAAC employed a complex sampling design to ensure representativeness of the population (OECD, 2014). In the United States, 5,010 adults were sampled on laptop computers, with 112 adults unable to respond to the BQ because of low literacy proficiency. Participant scores on assessments were estimated using 10 plausible values per content domain. Scores ranged from 0 to 500 and were classified into one of five levels. Levels for literacy and numeracy were: below Level 1 (0-175), Level 1 (176-225), Level 2 (226-275), Level 3 (276-325), and Levels 4/5 (326-500). Levels for PSTRE were below Level 1 (0-240), Level 1 (241-290), Level 2 (291-340), and Level 3 (341-500; OECD, 2014).

PIAAC public-use data files contain perturbed and categorized individual data to ensure confidentiality. Weights were applied to ensure that each respondent sampled represented an accurate proportion of the population and that standard errors would reflect the variability estimated in the population. The population was estimated through the American Community Survey of 2010 at 203 million adults. More detail on sampling, weighting, BQ administration, and assessments is available in the PIAAC Technical Report (OECD, 2014).

### **Analytical Approaches**

We analyzed data using IDB Analyzer software (available for download through the PIAAC Gateway website) and SPSS. We compared means of plausible values for literacy, numeracy, and PSTRE assessments and conducted categorical analyses (primarily cross tabulations). To determine if group differences were significant, we calculated effect sizes separately using

standard errors generated from software, with a 95% confidence threshold of twice the standard error.

## PIAAC Participants

U.S. PIAAC participants overall ranged in age from 16 to 65 years, with a median age group of 40 to 44 years. Females made up 50.9% of PIAAC participants. Reported median income<sup>1</sup> was between \$29,000 and \$36,000 per year. Regionally<sup>2</sup> adults came from the Northeast USA (18.1%), Midwest (21.6%), South (36.9%), or West (23.4%). Most participants were native English speakers; 12.1% did not speak English outside the home. Reported health-related conditions included difficulty seeing print (11.4%), difficulty hearing conversation (8.7%), and diagnoses of learning disability (8.0%).

Skill levels from U.S. PIAAC assessments averaged in the Level 2 range, below international averages. The literacy mean score was 270 (SE = 1.0). At this level respondents were tasked with matching text and information, paraphrasing, and making low-level inferences (OECD, 2014). Numeracy scores averaged much lower, with a mean of 253 (SE = 1.2) but still in Level 2. PIAAC respondents at this level could be expected to respond to mathematical content in common contexts and to apply two or more steps to solving math problems. PSTRE scores averaged 277 (SE = 1.1), or at Level 1. The average respondent at that level would be expected to use commonly available technology applications requiring little navigation to access information to solve relatively straightforward problems (OECD, 2014).

U.S. adults taking PIAAC assessments came from a range of educational backgrounds. The median educational level of participants was high school completion. Approximately 80 million, or 41.1% of adults surveyed in PIAAC, completed high school. A slightly higher percentage, 44.2%, representing

86 million adults, reported attending or completing college. While at first glance it may appear that adults completed college at a higher rate than high school, figures above leave out an important third group, namely those who did not complete high school. Nearly 29 million adults did not complete high school, approximately 14.7% of adults. With the first and third groups combined, it is apparent that 55.8% of working-age Americans had not completed formal education beyond a secondary level.

Even though more adults ended formal learning with high school than with college, one in four adults (24.9%) participated in formal education in 12 months prior to PIAAC assessment (i.e., “in the past year”), and more than half (56.2%) pursued non-formal<sup>3</sup> education. When asked if they had ever not completed a program of study they started, 31.3% replied that they had not.

Most adults were employed (73.9%). The remainder reported being either unemployed (7.9%) or out of the labor force (18.7%). Less than two percent were apprenticed. One-third of employed participants managed other employees. Employed adults most often worked in the private sector (74.2%). Their workplaces were typically small businesses of 11 to 50 employees, and they most often perceived the workplace as staying essentially the same size. Half of employees (52%) had worked in more than one company within five years before PIAAC. Only 13.9% were self-employed.

## Definitions

We divided adults into two major groups for this paper, Learners and Non-Learners, on the basis of learning information collected in PIAAC. *Learners* are those who pursued either formal or non-formal purposeful learning in the 12 months prior to PIAAC participation (i.e., as indicated from variables FE12 or NFE12). *Non-Learners* are those who pursued no

learning according to PIAAC designations of formal or non-formal learning. Learners comprised the largest portion of any education level.

Adults in both major groups are further disaggregated by education completion status in three levels: 1) those with *less than high school*, 2) those *completing high school*, and 3) those *attending or completing postsecondary programs*. These three education levels are designated as LHS, HS, and PSE, respectively. The major focus of analyses is on LHS and HS groups, which tend to be most in need in the labor market yet reported little postsecondary learning. An estimated 15.4 million LHS, 44.7 million HS, and 65.8 million PSE adults were Learners (see Figure 1 for percentages). The estimated numbers of Non-Learners were 13.2 million LHS, 35.1 million HS, and 20 million PSE adults.

The term purposeful learning is used to differentiate adult learning in formal or non-formal settings from informal, self-directed learning (not collected in PIAAC). Formal learning is offered by an education or training institution, such as a college, awards credit, and is structured by learning time and objectives. Non-formal adult learning, also structured and intentional, refers to non-credit organized learning activities outside formal institutions, such as in the workplace.

Another key variable is monthly income, which includes monthly wages earned as well as bonuses and was originally organized into deciles. For this paper, it was re-grouped at the median to *high income* (deciles 6 through 10) and *low income* (deciles 1 through 5) to ensure sufficient cell size in analyses; the median ranged between \$2,423 and \$3,000 monthly, or approximately \$29,000 to \$36,000 annually, which represents 300% of federal poverty level for an individual (U.S. Census Bureau, 2012). Age was categorized in groups as 16 to 19 years, and then in five-year increments from 20 through 65 years.

For further context, it is also important to explain uses of the terms *job-related reasons* and *employer support*. Job-related reasons for non-formal learning include both short-term and long-term reasons, such as to do their current job better, improve career prospects, or satisfy employer requirements. Employer support refers to an employer paying for some or all costs of participating in formal or non-formal learning. Adults could also designate no such costs or lack of support because they were not employed while learning.

## Findings

Our findings include major demographic characteristics of adult Learners and Non-Learners when disaggregated by education level. We also present assessed skill levels by subgroup and compare subgroups by educational and employment background. Further findings are presented on types of recent adult learning, barriers to learning, and motivators.

## Demographics

Adult Learners and Non-Learners may be characterized in terms of region, age, gender, income, household composition, and disability status (see Table 1). Regionally, Learners in the Northeast USA tended to have the highest percentage of PSE Learners and Non-Learners whereas the Southern USA had highest proportions of LHS and HS Non-Learners. Average age of Learners increased with each education level completed. LHS and HS Non-Learners were older than LHS and HS Learners overall.

By gender, percentages of female Learners increased and of male Learners decreased with higher education levels. As shown in Figure 2, most LHS and HS adults earned a low monthly income. In contrast, two-thirds of PSE Learners earned a high income

(i.e., above \$36,000), which suggests a premium in earnings for those with college degrees who keep learning over those who don't.

Concerning household composition, LHS and HS Non-Learners were partnered at more than twice the rate of their Learner counterparts. Median household size for LHS Learners was four people; for all other categories, the median was three (see Table 1). This difference appears to represent young adults who may live at home with parents and siblings, or with roommates. For Learners a positive relationship occurred with parenting (see Figure 3). The rate of Non-Learners having children decreased as education level increased.

LHS and HS Non-Learners experienced visual and hearing difficulties more than LHS and HS Learners did. LHS Non-Learners reported the highest rate of visual difficulties, 27.2%. Reported incidence of LD increased with lower education levels. LHS Non-Learners had an even higher incidence of LD.

### **Skill Levels**

Describing current adult skill levels in Literacy, Numeracy, and PSTRE is integral to a fuller understanding of the role of learning, especially when skill levels differ by learning status. Numeracy scores were lowest in all three education levels, irrespective of learner status (see Figure 4). All Learners had higher mean scores in either skill area than did Non-Learners.

In PSTRE, LHS and HS Learners and HS Non-Learners averaged in Level 1 (see Figure 5). LHS Non-Learners averaged below Level 1. LHS and HS Learners appear to have higher PSTRE skills than do Non-Learners, yet neither exceeds Level 1. Taken together, these skill level differences indicate that LHS and HS Learners have stronger skills in Literacy, Numeracy, and PSTRE than peers who do not pursue learning.

In addition to taking PIAAC assessments, adults, whether native English speakers or English Language Learners (ELLs), reported their English skill levels. Overall Learners struggled with English skills less than Non-Learners did (see Figure 6). Moreover, more than a third of LHS Non-Learners could not read or write English well. Percentages of reading “not well or not at all” represent an estimated 7.4 million Non-Learners and 3.1 million Learners. Approximately 9.5 million Non-Learners and 4.3 million Learners cannot *write* English well or at all.

### **Education Background**

Adult and parental education attainment adds to descriptions of Learners and Non-Learners. As might be expected, virtually all LHS Learners and Non-Learners ended their secondary experiences by age 19. Approximately one-fourth of PSE Learners completed by age 25 to 29 and another fourth at an older age.

Differences in the age Learners left education were apparent by income, as shown in Figure 7. Low-income Learners leaving education from 16 to 19 did so about twice as often as high-income Learners. Low-income Learners also had a higher rate of leaving education at age 20 to 24 than their high-income age peers but showed more persistence at the next two age levels.

Most Learners came from families with a parent completing at least high school (see Figure 8), which highlights the important role of family in encouraging education. In stark contrast, most parents of LHS Non-Learners tended *not* to have finished high school, and only one-tenth had a parent who completed PSE. Given the median Non-Learners' age (45 to 49), another explanation is that many parents went to school when high school graduation was less common.

## Employment Background

Information on employment background—employment status, sector, work hours, and job satisfaction—also fills in the picture of Learners and on-Learners (see Table 4). Participation in employment increased with successive education levels. LHS Non-Learners tended to be employed more often than LHS Learners, yet experienced a high rate of permanent disability, which may partially explain their lack of learning. Both groups generally stayed with the same employer over five years.

Overall LHS Learners were employed in small businesses of up to 50 employees and most worked part time (up to 20 hours weekly; see Table 5). LHS Non-Learners also tended to be employed in small businesses, yet worked full time (21 to 40 hours weekly).

HS Learners experienced mobility in employment, with an average 2.4 organizations employing them in five years, whereas HS Non-Learners tended to stay with just one organization. HS Learners and Non-Learners most frequently worked full time. Overall HS Learners worked in mid-size businesses of up to 250 people (77.0%). HS Non-Learners, in contrast, tended to work in small businesses (56.3%).

A key component of employment is job satisfaction. More than three-fourths of Learners and Non-Learners reported being satisfied or extremely satisfied with their jobs (see Table 4). Older adults or those with high incomes tended to be satisfied with their jobs more often than younger or low-income adults were.

## Types of Recent Learning

The characteristics and background of Learners provided a backdrop to contextualize types of learning. Figure 9 displays proportions of Learners who pursued formal learning, non-formal learning, or both in the year before PIAAC participation. The

largest group of Learners pursued only non-formal learning.

**Recent Non-formal Learning.** As shown in Table 6, 83.0% of LHS Learners and 84.6% of HS Learners learned non-formally. LHS and HS Learners in non-formal learning tended to be men (56.4% and 52.2%, respectively). Non-formal Learners tended to pursue even more non-formal learning with age.

Non-formal learning was differentiated by program type: apprenticeship, English language skills, adult basic skills, or preparation for the GED test or other high school equivalency. Less than five percent of adults were apprentices. Apprentices were predominantly young, male, or low income. Of those ELLs who reported ever learning English as an adult, 34.5% did so in ELL class or tutoring in the past year, with most learning English for personal reasons. About one-fourth (28%) of LHS and HS Learners combined participated in ABE, GED Prep, or HSE. Of LHS and HS non-formal Learners, an estimated 6 million adults (14.0%) reported learning in ABE, 2.4 million in GED Prep (5.6%), and 1.9 million in other HSE (4.4%).

Learners learned non-formally via open or distance education (DL), on-the-job training (OJT), seminars or workshops (SEM), and private lessons or other learning (PRIV). Some learners participated in more than one non-formal method. About three-fifths of LHS and HS Learners who pursued non-formal learning participated in OJT (see Figure 10).

Non-formal Learners participated in SEM next most often, with rates increasing substantially at higher education levels. LHS and HS Learners took advantage of non-formal DL or PRIV least often, with about one-tenth choosing PRIV.

The majority of non-formal Learners reported having access to learning opportunities during worktime. Job-related reasons for non-formal learning include both short-term and long-term reasons, such

as to do their current job better, improve career prospects, or satisfy employer requirements. About one-fourth of non-formal Learners also learned formally—23.4% of LHS non-formal Learners and 27.8% of HS non-formal Learners did both. Of formal HS Learners, 60.5% also learned non-formally.

**Recent Formal Learning.** As might be expected from their overall youth and low skill levels, LHS Learners had a very high rate of participation in formal learning in the past year (74.1%). LHS Learners studying formally were predominantly younger than 24 years old (89.8%). Nearly all (95.3%) had low incomes, and more than half (54.0%) were male. Two-fifths worked while learning formally, mostly part time.

Formal learning rates were much lower for HS Learners (39.1%). About half (52.0%) of HS Learners studying formally were women. The vast majority of HS Learners studying formally tended to have low incomes (85.2%). About half of HS Learners worked full time weekly (51.3%) while studying formally. Two-thirds of HS formal Learners found it useful to their jobs.

## Barriers and Motivators to Learning

The minimal participation in learning of LHS and HS adults noted previously suggests the presence of barriers and a need to examine reasons that might provide motivation to learn. Barriers include costs of learning and lack of time. Motivators include both job-related motivators—such as job or career enhancement and job stability—and personal interest motives, such as personal reasons and family reasons.

**Barriers to Learning.** A major barrier to learning is cost, especially for LHS and HS adults who predominantly have low incomes. Employer support refers to an employer paying for some or all costs of formal or non-formal learning. When employers can provide support to employees to defray learning

costs, even in part, this barrier can be mitigated or removed completely.

Figure 11 shows proportions of employer support received by education level (percentages for learning at no cost and learning without being employed are excluded from Figure 11). A sizable gap in support for formal learning occurred for the least educated Learners, 10.3% for LHS Learners and 15.5% for HS Learners vs. 35.5% for PSE Learners. The vast majority of these formal Learners were low-income Learners with little disposable income for formal education.

Another barrier to learning, especially for formal learning, is release time. Nearly all HS Learners (89.6%) who were employed while in formal education learned primarily outside work. PSE Learners got release time from work for formal education at nearly twice the rate (18.8%) of HS Learners (10.3%). Non-formal learning activities, on the other hand, tended to occur primarily during work hours for HS Learners (73.3%).

## Job-related Motivators

Adults may be motivated to learn either for job-related reasons or from personal interest motives. As noted earlier, many adult learners participated in learning for job-related reasons, including job or career enhancement and job stability. Most Learners participated in non-formal learning for work reasons; 76.0% of LHS and HS Learners and 73.2% of PSE Learners pursued non-formal learning for job-related reasons. Higher percentages of male HS and PSE Learners (80.2 and 76.2%, respectively) learned non-formally for job-related reasons than females (71.8 and 70.4%, respectively). Proportions of non-formal learning for work reasons did not differ significantly by income. Most Learners who studied formally also did so for job-related reasons; 72.2% of LHS Learners and 74.6% of HS Learners who pursued recent formal

studies did so for job-related reasons.

Another job-related motivator is job stability. Employees with concerns about job stability may move to other companies or seek further education to cushion any future job losses in an unstable economy. Alternatively, employees who focus on learning may need to change jobs to get working conditions or a work schedule that allows for learning. Learners at higher education levels who pursued learning indicated changing jobs one or more times in the past five years. HS Learners tended to work in companies experiencing growth (25.0%) and tended to change employers more readily (58.1% had two or more employers in five years), whereas HS Non-Learners appeared to be in companies experiencing less growth (18.1%) and generally remained there within a five-year period (40.6% had two or more employers in five years).

### Personal-interest Motivators

In addition to job-related motivators, adults learn for reasons of personal interest, such as personal and family reasons. A small proportion, 20.4% of LHS and 15.8% of HS Learners in non-formal learning, did so for personal reasons. Having a spouse or partner and having older children benefitted non-formal learning participation for HS Learners, but a larger household size did not. Simply having a spouse or partner was negatively associated with formal learning; 23.8% of HS Learners with partners learned formally, versus 60.0% of HS Learners without partners. However, formal learning participation increased as household size expanded for HS Learners—from 32.9% of HS Learners in two-member households to 49.7% of HS Learners in households of six or more.

### Discussion

PIAAC findings in this paper indicate approximately 73% of adults without postsecondary degrees, representing 80 million LHS and HS adults, have *not* pursued formal PSE recently. These 80 million adults represent an enormous amount of human capital that is not being tapped. Participation in adult learning has not grown evenly by education level or income. Significantly large gaps between LHS, HS, and PSE participants revealed a positive relationship between assessed skills and educational attainment, in keeping with previous research (Reder, 2013). Data on adult skills in literacy, numeracy, and PSTRE point to a great need for learning among LHS and HS adults. A gap exists between the educational haves and have-nots. It appears that those who most need support for further learning—the least educated and poorest—have access to fewest resources, while those with postsecondary degrees have the highest incomes, most release time for learning, and most employer support to cover learning costs.

### Demographic Implications

Analysis of substantial demographic differences between Learners and Non-Learners at LHS and HS levels identified characteristics that educators could recognize and utilize in efforts to attract Non-Learners to learning. LHS and HS Non-Learners tended to have low incomes and be middle-aged, with most having spouses/partners and children. They sometimes faced barriers associated with visual or hearing difficulties and the least educated tended to report a high rate of learning disabilities. Recruitment efforts targeted to middle-aged Non-Learners that emphasize improvements to the standard of living for their families as well as raising skill levels for themselves (Autor, 2014) could be very fruitful. For efforts in reaching Non-Learners to be successful,

however, they would need to target adults well beyond the traditional PSE age and to address potential barriers of low skills, low income, scheduling, and disabilities (Kis & Field, 2013).

The potential pool of adult learners with LHS- or HS-level education is huge, and adults at both levels tend to have similarly low technology skills. The importance of adult learning for keeping up skills grows as adults get further away from secondary education (OECD, 2013). In fact, without further education beyond high school, prospects for getting out of a low-income bracket look very bleak. Findings in this study point to a great need for formal learning support for LHS and HS Learners who may have delayed beginning formal learning to save up money to pay for it or negotiate life barriers (Carnevale, Smith, & Strohl, 2013; Research Allies for Lifelong Learning, 2013).

The connection of Literacy scores and learning may in turn relate to adult performance in Numeracy. LHS Learners and Non-Learners were almost a full skill level apart in Literacy and Numeracy. The tendency for the gap between LHS and HS levels to narrow became even stronger for Learners than for Non-Learners. If Literacy skills of Non-Learners were raised, Numeracy skills would therefore tend to benefit, and vice versa. Policies that address inequality between adult educational levels through learning may raise the “total supply of skills available to the economy” (Autor, 2014, p. 250).

The overlap of mean PSTRE scores for LHS and HS Learners is a promising sign that Learners with the least education have potential to raise PSTRE skills through learning, or for those who gain PSTRE skills to become involved in learning. However, more than a fourth of PIAAC participants could not take PSTRE because of a lack of computer skills (OECD, 2014), and it appears that most adults are

using technology to solve problems at a basic level, at best. Thus many could benefit from interventions involving technology and learning.

## **Background Implications**

For adults older than 24, dropout rates from formal education, particularly for those with low incomes, were low. This finding is in keeping with earlier research that adults beyond traditional college age pursuing formal learning tend to persist in learning, even though overall graduation rates are minimal (Patterson, et al., 2010). This persistence presupposes that adults have overcome barriers to start learning (Reder, 2007; Research Allies for Lifelong Learning, 2013) and that once started, deterrents related to low skills and low income (Kis & Field, 2013) were removed.

For adults with less education, getting to further formal learning, however, often depends on encouragement of parents (Research Allies for Lifelong Learning, 2013). Since most Non-Learners lack parental PSE role models, they may need to rely on other family members or mentors for encouragement (McAnaney, 2009; Patterson, 2014). Employers could also play a meaningful role in guiding low-skilled Non-Learners to gain new skills (Kis & Field, 2013).

Findings on employment background further characterized LHS and HS Non-Learners as longtime employees working full time in small businesses where few employee educational benefits are likely available. With limited skills, they may hesitate to look further, particularly in uncertain times. Not recognizing the connection between learning and career prospects hampers participation in adult learning (Kis & Field, 2013) and can even contribute to a “vicious cycle” of minimal learning and fewer career opportunities (OECD, 2013, p. 137). For Non-

Learners, workplace learning could boost career opportunities (Autor, 2014; Kis & Field, 2013).

### **Implications from Learning, Barriers, and Motivators**

Many millions of LHS and HS adults have not participated in learning recently. The average 110 hours per year of non-formal learning, low incidence of DL, and low participation rates in formal education are minimal when Literacy, Numeracy, and PSTRE skill gaps loom as large as they do. Learning via technology represents a promising means of learning (OECD, 2013). Policies which encourage growth in digital literacy and DL have potential to assist adults in gaining additional skills.

Institutional barriers associated with employer support remain—either in costs or work schedules (Schleicher, 2013). Further analyses conducted in this paper indicated some employer support for non-formal learning and very little support for formal learning. Overall, release time was primarily available only for non-formal learning. To compound the issue, employer support was most lacking for adults at the lowest education levels, who need it most. Policies that encourage non-formal workplace learning, such as via networking and collaborative learning, could help Learners see its relevance to daily work life and future career prospects.

Early PIAAC findings pointed to a connection between learning and employee mobility (Schleicher, 2013); this paper found little mobility for employees

with low education levels. In earlier generations, job stability implied staying with a single employer and rising through the ranks; in the current economy, changing jobs to a position requiring higher skill levels may be the only way to move up in a career (Carnevale, Smith, & Strohl, 2013).

### **Limitations and Recommendations for Future Research**

Results from analyses of PIAAC data on formal and non-formal adult learning are descriptive only; no causality is implied. Employing public-use data meant that individual differences could not be examined; this greater level of precision could benefit future predictive studies.

Future research could focus on deeper investigation of skill levels. For example, more research on relationships of Literacy and Numeracy skills to learning would be informative to educators, especially if disaggregated by subpopulation. An additional recommendation for future research is more in-depth study of Non-Learners. While this paper has contributed some basic information about their characteristics and skills, it would be very informative to employers and educators alike to know more, in order to motivate Non-Learners toward learning and retain those who start. A final recommendation is more detailed study of relationships in PIAAC data among family composition, household size, and family roles to learning. ❖

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<sup>1</sup>Monthly income includes bonuses for wage and salary earners and self-employed adults and was organized into deciles.

<sup>2</sup>Regions of the USA are based on states within U.S. Census regions (see [https://www.census.gov/geo/maps-data/maps/pdfs/reference/us\\_regdiv.pdf](https://www.census.gov/geo/maps-data/maps/pdfs/reference/us_regdiv.pdf)) and were determined from participants' addresses.

<sup>3</sup>Educational categories for formal and non-formal education are not mutually exclusive; that is, the adult could participate in either formal or non-formal education, or both.

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## References

- Almeida, C., Johnson, C., & Steinberg, A. (2006). Making good on a promise: What policymakers can do to support the educational persistence of dropouts. *Double the numbers: A Jobs for the Future Initiative*. Retrieved from: <http://files.eric.ed.gov/fulltext/ED491182.pdf>
- Archer, W., & Garrison, D.R. (2010). Distance education in the age of the internet. In C.E. Kasworm, A. D. Rose, & J.M. Ross-Gordon (Eds.), *Handbook of Adult and Continuing Education* (pp. 317-326). Los Angeles, CA: Sage.
- Autor, D. (2014). Skills, education, and the rise of earnings inequality among the “other 99%.” *Science*, 344, 843-851.
- Carnevale, A., Smith, N., & Strohl, J., (2013). *Recovery: Projections of job and education requirements through 2020*. Washington, DC: Georgetown Center on Education and the Workforce.
- Cook, B. G., & King, J. E. (2004). *Low-income adults in profile: Improving lives through higher education*. American Council on Education, Center for Policy Analysis.
- Cranton, P. (1992). *Working with adult learners*. Toronto, Ontario: Wall & Emerson.
- Cross, K.P. (1981). *Adults as learners*. San Francisco, CA: Jossey-Bass.
- Ginsberg, M. B., & Wlodkowski, R. J. (2010). Access and participation. In C.E. Kasworm, A. D. Rose, & J.M. Ross-Gordon (Eds.), *Handbook of Adult and Continuing Education* (pp.25-34). Los Angeles, CA: Sage.
- Hansman, C. A., & Mott, V. W. (2010). Adult learners. In C.E. Kasworm, A. D. Rose, & J.M. Ross-Gordon (Eds.), *Handbook of Adult and Continuing Education* (pp. 13-24). Los Angeles, CA: Sage.
- Kis, V, & Field, S. (2013). *Time for the U.S. to reskill? What the Survey of Adult Skills says*. OECD Skills Studies, OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/9789264204904-en>.
- McAnaney, S. (2009). *Assessing barriers to education among GED graduates entering college*. College Park, MD: University of Maryland Department of Social Work.
- Merriam, S.B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide* (3<sup>rd</sup> ed.). San Francisco, CA: Jossey-Bass.
- National Center for Education Statistics, (2006). *National Household Education Survey of 2005*. Washington, DC: U.S. Department of Education.
- National Center for Education Statistics, (2007). *The condition of education 2007*. (NCES 2007-064). Washington, DC: U.S. Department of Education.
- OECD (2013). *OECD skills outlook 2013: First results from the Survey of Adult Skills*. OECD Publishing. Retrieved from: <http://dx.doi.org/10.1787/9789264204256-en>.
- OECD (2014). Technical report of the Survey of Adult Skills (PIAAC). Retrieved from: <http://www.oecd.org/site/piaac/publications.htm>.

- Parsad, B., & Lewis, L. (2008). *Distance education at degree-granting postsecondary institutions: 2006-07*. Retrieved from <http://nces.ed.gov/pubs2009/2009044.pdf>.
- Patterson, M.B., Zhang, J., Song, W., & Guison-Dowdy, A. (2010). *Crossing the bridge: GED credentials and postsecondary outcomes, Year 1 report*. Washington, DC: American Council on Education.
- Patterson, M.B. (2014). Post-GED-credential college prospects for adults with special needs. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 3 (3), 22-35.
- Prins, E., Drayton, B., & Gungor, R. (2010). *GED preparation through distance learning in rural Pennsylvania*, Institute for the Study of Adult Literacy, The Pennsylvania State University.
- Quigley, B. A. (2006). *Building professional pride in literacy*. Melbourne, FL: Krieger Publishing Company.
- Quigley, B. A., Patterson, M. B., & Zhang, J. (2011). *Perceptions and pathways: Life decisions of GED test credential recipients from secondary to postsecondary education*. Washington, DC: American Council on Education.
- Radford, A. (2011). *Learning at a distance: Undergraduate enrollment in distance education courses and degree programs*. Washington, DC: National Center for Education Statistics.
- Reder, S. (2007). Giving literacy away, again: New concepts of promising practice. In A. Belzer (Ed.), *Toward defining and improving quality in adult basic education: Issues and challenges* (pp.255-276). Mahwah, NJ: Erlbaum.
- Reder, S. (2010). *Adult literacy development and economic growth*. Washington, DC: National Institute for Literacy.
- Reder, S. (2012). *The Longitudinal Study of Adult Learning: Challenging assumptions*. Montreal, Quebec, Canada: The Centre for Literacy.
- Reder, S. (2013). Lifelong and life-wide adult literacy development. *Perspectives on Language and Literacy*, 39(2), 18-21.
- Research Allies for Lifelong Learning, (2013). *Professional development on Perceptions and Pathways findings*. Retrieved from <http://www.researchallies.org/Recommendations.html>.
- Rocco, T.S. & Fornes, S.L. (2010). Perspectives on disability in adult and continuing education. In C.E. Kasworm, A. D. Rose, & J.M. Ross-Gordon (Eds.), *Handbook of Adult and Continuing Education* (pp. 379-388). Los Angeles: SAGE Publications.
- Ross-Gordon, J. M. (2011). Research on adult learners: Supporting the needs of a student population that is no longer nontraditional. *Peer Review*, 13(1), 26-29.
- Ryu, M. (2010). *Minorities in higher education: Twenty-fourth status report*. Washington, DC: American Council on Education
- Schleicher, A. (2013). *Skilled for Life? Key findings from the Survey of Adult Skills*. Brussels, Belgium: OECD
- Spellman, N. (2007). Enrollment and retention barriers adult students encounter. *Community College Enterprise*, 13(1), 63-79.

**Table 1—Adult Learner and Non-Learner Demographics by Highest Education Level**

Characteristic	Learners			Non-Learners		
	LHS (%)	HS (%)	PSE (%)	LHS (%)	HS (%)	PSE (%)
Region: Northeast	10.8	27.8	61.4	12.1	51.4	36.5
Region: Midwest	12.5	37.0	50.6	14.3	53.7	32.0
Region: South	13.8	35.5	50.7	23.4	54.9	21.7
Region: West	10.9	39.8	49.3	22.6	42.6	34.9
Median Age (in years)	16-19	30-34	40-44	45-49	45-49	45-49
Gender: Female	44.7	48.6	53.4	49.4	50.1	58.1
Income: Low	91.8	63.2	32.2	82.0	63.9	43.9
Partner Status: Single	75.4	44.6	22.7	31.7	21.4	22.9
Median Household Size	4	3	3	3	3	3
Difficulty Seeing	10.2	9.6	7.4	27.7	14.6	12.7
Difficulty Hearing	7.0	7.5	7.2	12.4	12.5	8.8
Learning Disabilities	13.1	8.5	4.9	17.0	8.6	6.4

**Table 2—Learner Mean Scores on Literacy, Numeracy, and PSTRE by Highest Education Level**

Skill Area	LHS		HS		PSE	
	Mean	SE	Mean	SE	Mean	SE
Literacy	246.4	2.7	268.4	1.9	295.7	1.5
Numeracy	221.0	3.0	249.7	2.0	284.4	1.7
PSTRE	268.0	3.2	274.4	2.1	293.1	1.7
%	12.3	0.3	35.5	0.8	52.3	0.7

**Table 3—Non-Learner Mean Scores on Literacy, Numeracy, and PSTRE by Highest Education Level**

Skill Area	LHS		HS		PSE	
	Mean	SE	Mean	SE	Mean	SE
Literacy	211.4	2.8	251.4	1.8	277.2	1.9
Numeracy	183.5	3.0	232.1	2.2	263.3	2.4
PSTRE	235.5	3.9	256.3	1.9	276.0	1.9
%	19.3	0.8	51.4	1.0	29.2	1.1

**Table 4—Adult Learner and Non-Learner Employment by Highest Education Level**

Status	Learners			Non-Learners		
	LHS%	HS%	PSE%	LHS%	HS%	PSE%
Employed	49.2	79.0	88.3	54.6	61.1	63.8
Unemployed	19.2	8.5	4.1	6.9	9.6	8.4
Out of Labor Force	31.6	12.5	7.6	38.5	29.3	27.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
On Permanent Disability	0.9	1.8	1.2	17.0	10.8	7.9
Employer Sector: Private	83.3	76.4	63.0	93.1	87.0	81.0
Employer Size: Median Number Employed	11-50 People	11-50 People	51-200 People	11-50 People	11-50 People	11-50 People
Job Satisfaction: Extremely Satisfied or Satisfied	78.7	75.4	82.1	79.1	76.5	78.0
Employed with Single Employer	90.1	87.0	86.5	95.5	89.3	86.4
Employed and Stayed with Same Employer for 5 Years	55.0	41.9	42.6	61.7	61.5	52.6
Employed and Is A Manager	15.9	31.3	40.8	20.8	26.1	35.7

**Table 5—Adult Learner and Non-Learner Work Hours by Highest Education Level**

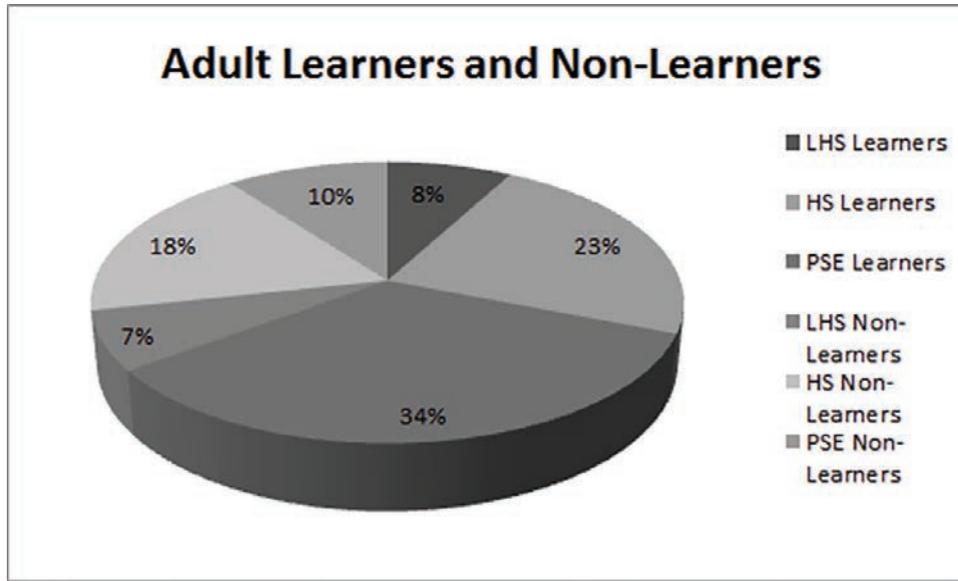
Work Hours	Learners			Non-Learners		
	LHS%	HS%	PSE%	LHS%	HS%	PSE%
<b>0 to 20 Hours</b>	44.5	17.4	9.9	10.0	11.3	14.6
<b>21 to 40 Hours</b>	41.3	54.4	45.5	67.2	58.0	48.3
<b>41 to 60 Hours</b>	12.6	25.3	40.4	18.7	26.8	33.2
<b>61 to 80 Hours</b>	1.6	2.2	4.0	4.1	4.0	3.9

**Table 6—Non-formal Learning by Highest Education Level**

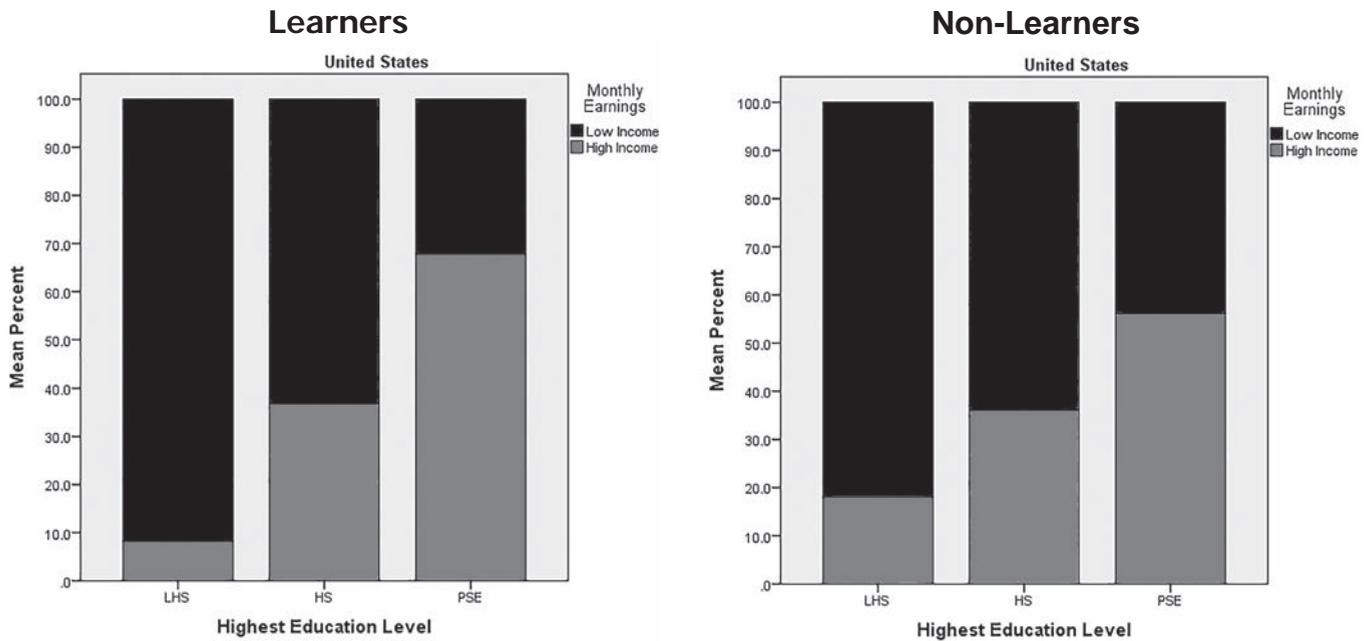
Status	Learners		
	LHS%	HS%	PSE%
<b>Non-formal Learners</b>	83.0	84.6	92.7
<b>Gender: Male</b>	56.4	52.2	46.6
<b>Time Spent Learning for Job-related Reasons: Mean</b>	114.5 hours	111.1 hours	113.4 hours
<b>Skill Type (within NFE)</b>			
<b>Apprenticeship</b>	2.5	3.1	1.9
<b>English Language Skills</b>	14.8	12.8	3.6
<b>Adult Basic Skills</b>	24.2	10.5	N/A
<b>High School Equivalency Preparation</b>	12.4	2.1	N/A

Note: N/A indicates not applicable to postsecondary level

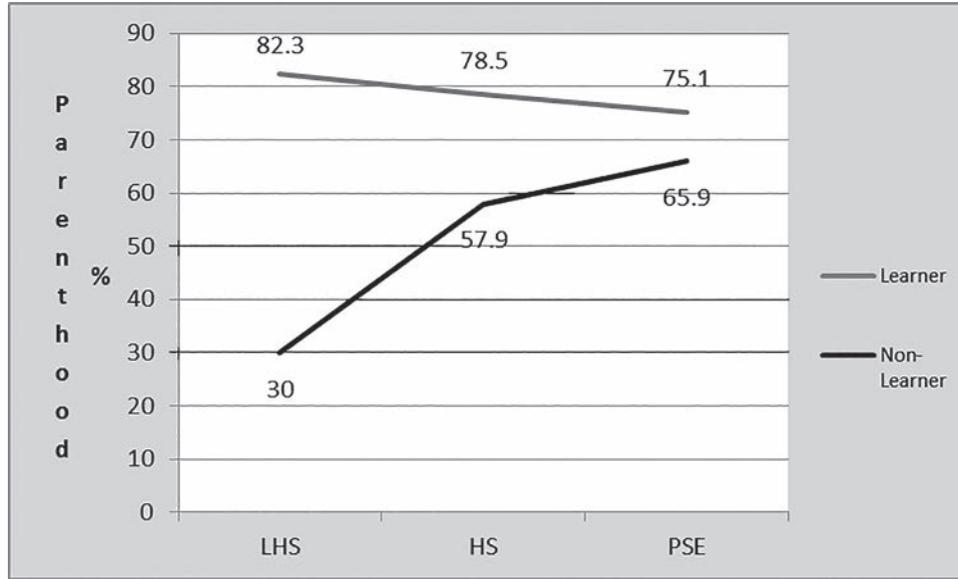
**Figure 1 – Adult Learners and Non-Learners by Highest Education Level**



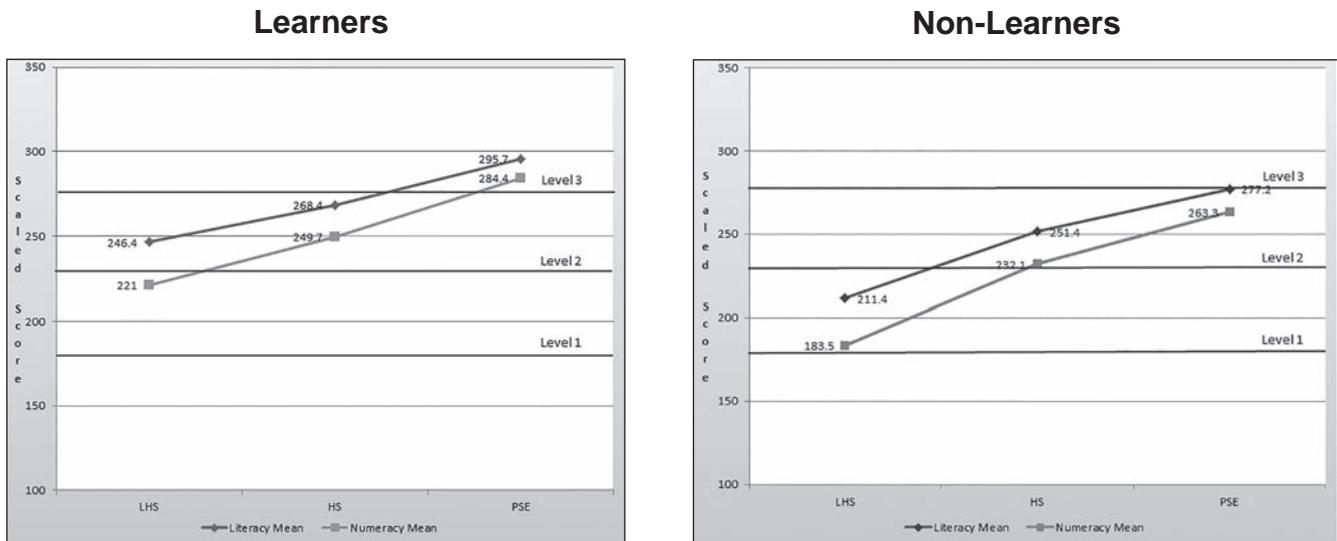
**Figure 2 – Adult Learner and Non-Learner Monthly Earnings by Highest Education Level**



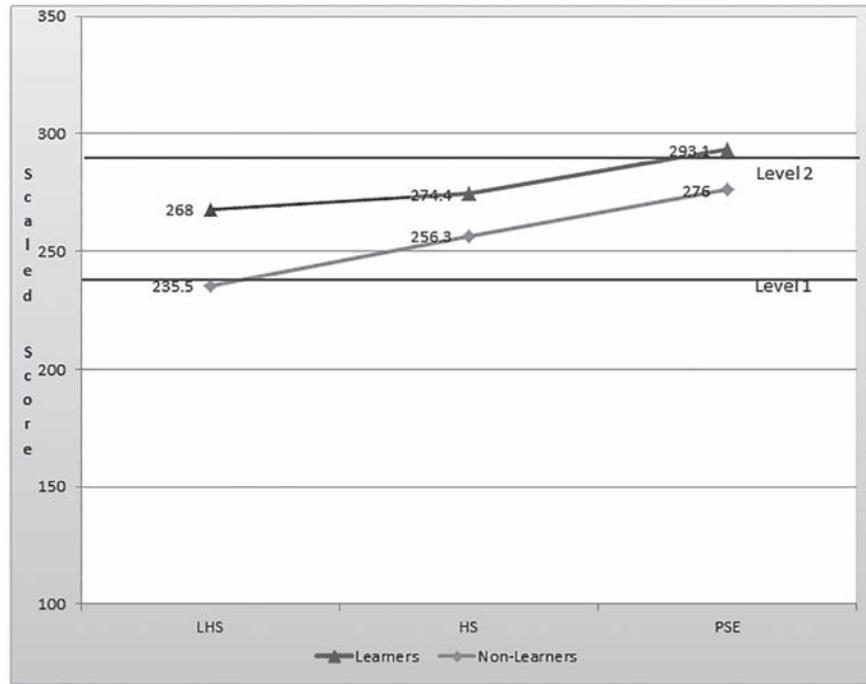
**Figure 3—Rate of Parenthood by Highest Education Level and Learner Status**



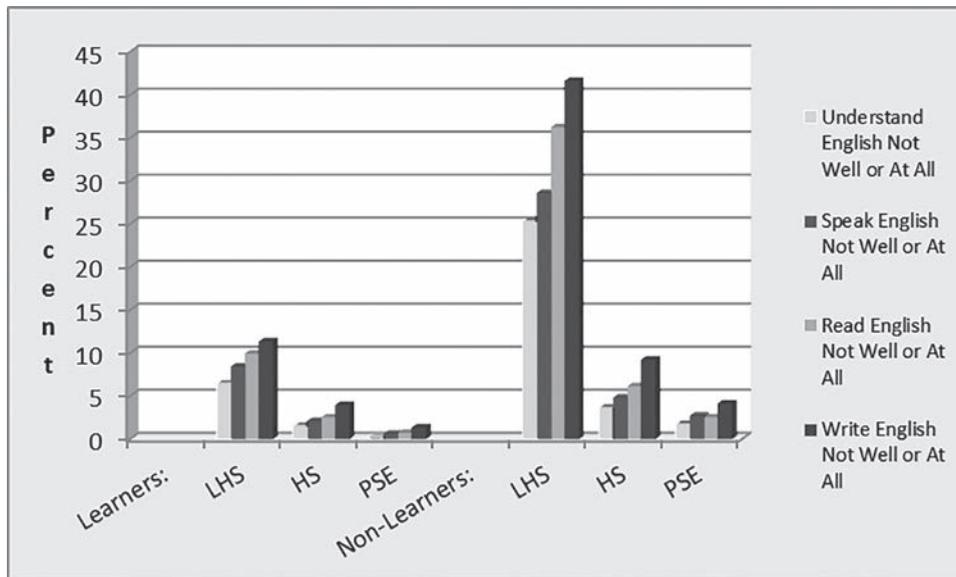
**Figure 4—Mean Scores on Literacy and Numeracy by Highest Education Level and Learner Status**



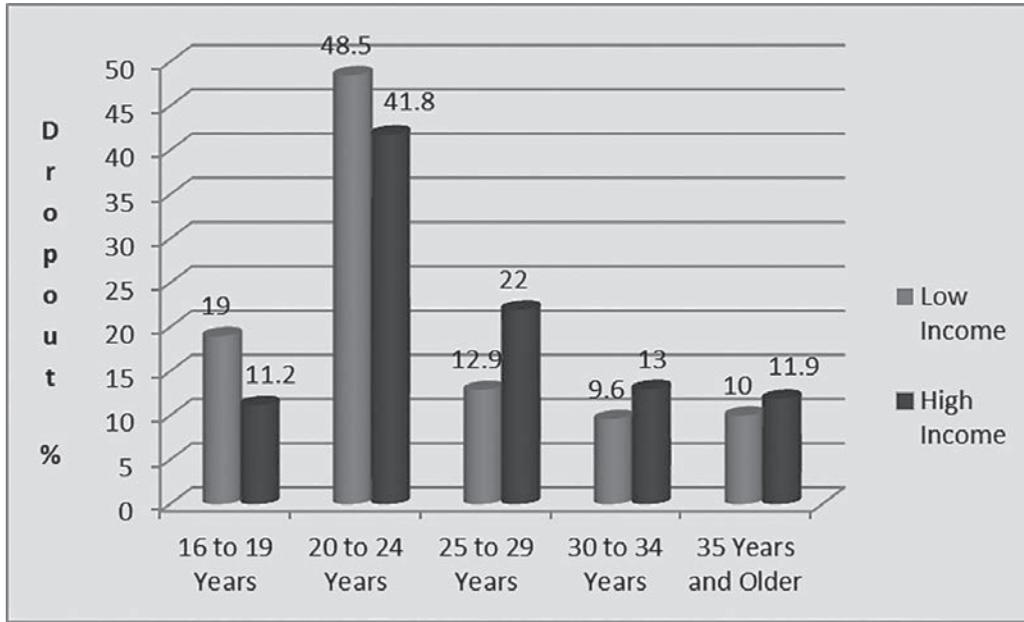
**Figure 5—Mean Scores on PSTRE by Highest Education Level and Learner Status**



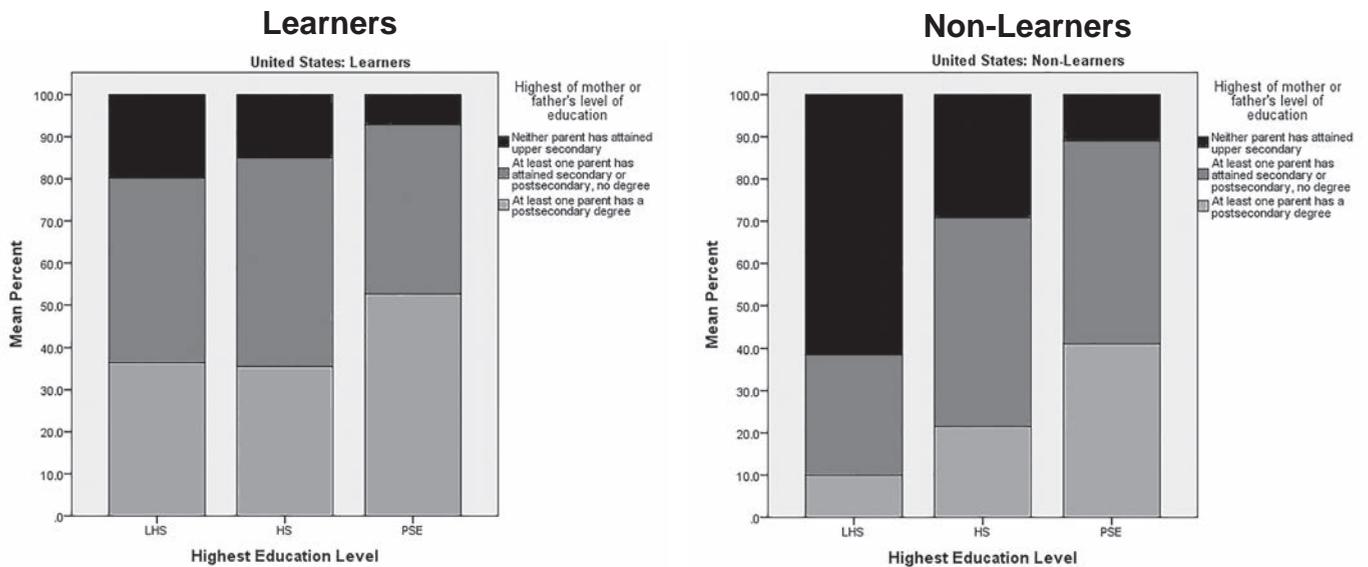
**Figure 6—Adult Struggles with English Language Skills by Highest Education Level and Learner Status**



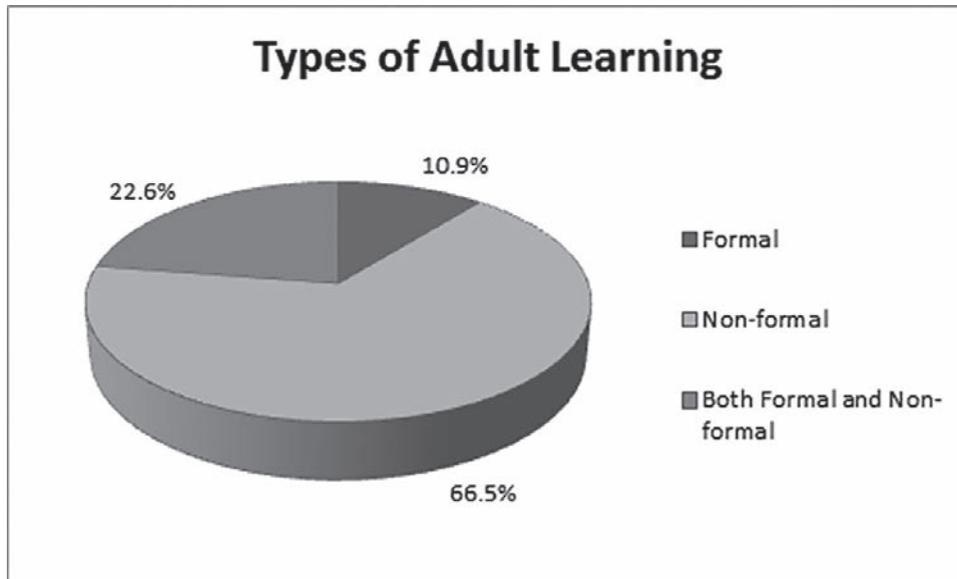
**Figure 7—Learner Dropout from Education by Age and Income**



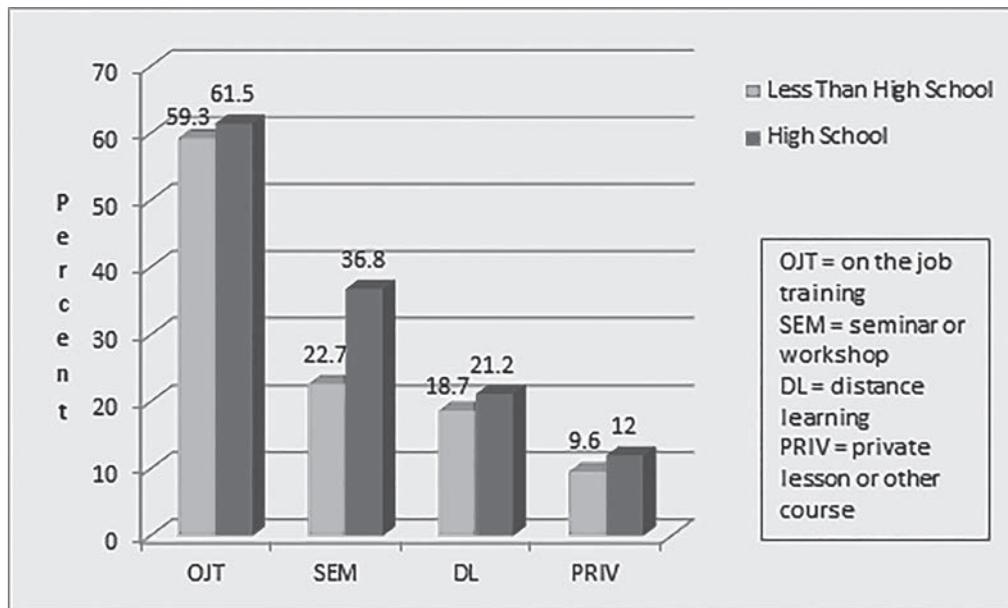
**Figure 8—Parental Education by Highest Education Level and Learner Status**



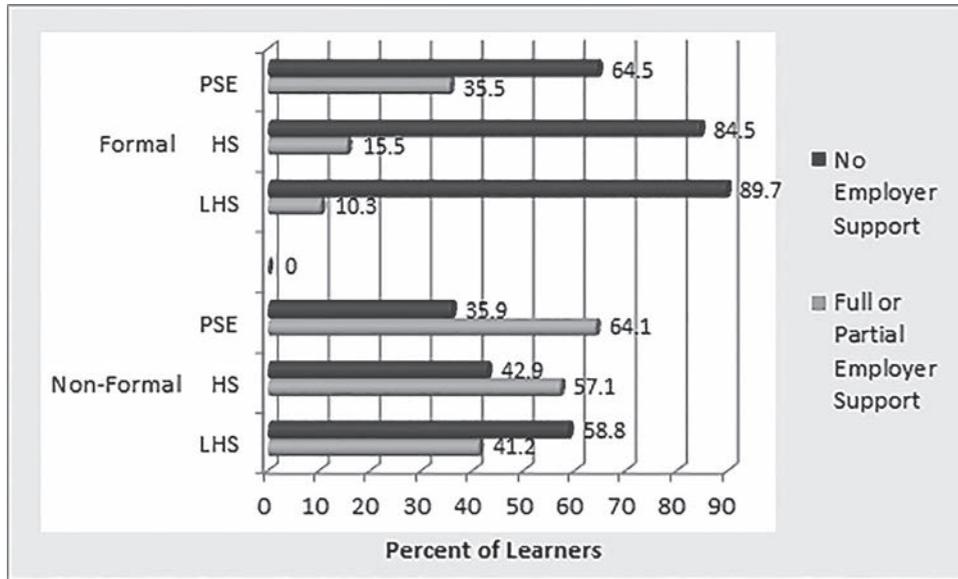
**Figure 9—Adult Learner Types of Learning Pursued**



**Figure 10—Adult Learner Methods of Non-formal Learning by Highest Education Level**



**Figure 11** – *Employer Support for Formal or Non-Formal Learning by Highest Education Level*



## Computer-based GED Testing: Implications for Students, Programs, and Practitioners

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### Abstract

The purpose of this study was to understand the process of transitioning from the 2002 version of the GED test to the new 2014 computer-based version. Specifically, this research sought to identify: (1) stakeholder attitudes regarding the new computer-based test; (2) the relationship between students' computer access/comfort and their perceptions of the new test; and (3) program modifications that will be most beneficial to this student population in terms of adequately preparing them for earning their high school equivalency via the GED. Key findings indicate: negative perceptions of computerized testing among participants, differences in attitudes and ability among students when compared by age and access to a computer in the home, and a desire for additional training and support among both students and teachers.

### Introduction

In January 2014, GED Testing Service transitioned to the fifth version of the test since its creation in 1942. Several major revisions were made, though one of the most notable changes was the move from a paper-based test to one that is entirely computer-based. Other changes included an increase in testing fees, as well as assessing students with more rigorous content in order to better measure and determine college and career readiness (Hoffman, Wine, & McKinney, 2013). Since the announcement of the new test was made, two challenges faced by high school equivalency (HSE) test preparation programs have been: (1) implementing a smooth transition to a new assessment, and (2) adapting programs to meet the evolving needs of students as a result of the requirements of the new test. These challenges, which occurred in the context of a changing adult basic education landscape, are important and timely topics; further, relatively little is known about how this process unfolded within individual programs.

Thus, the purpose of this study was to understand the ways in which two programs located in a southern state adapted to these changes, particularly regarding the move away from a paper-based test. This overarching purpose was guided by three research questions. First, what were the attitudes held by key

stakeholder groups about the new test leading up to its implementation? Second, what is the relationship between students' computer access/comfort and their perceptions of the new test? Third, how did these programs plan to address emerging student needs and adequately prepare these individuals for earning their high school equivalency via the GED? The following section of this paper includes a review of the relevant literature, which lays a foundation for this study.

### Literature Review

In order to frame the present study, it is important to consider three key areas from the literature. First, it is useful to understand the history and overview of the most recent changes to the GED test, as well as how these changes fit into the larger Adult Basic Education (ABE) context. Second, this review briefly describes the scholarly work pertaining to adults and their computer use and comfort. Third, an overview of the skillset and outcomes needed for HSE graduates is addressed.

Over 70 years ago, the General Education Development (GED) test was made available by the American Council on Education and was designed to assist in job placement of returning war veterans. In the years that followed, however, the purpose of the test was extended to assist adult civilians in need of an alternative to a high school diploma (Quinn, 2002). While the first version of the GED test was used for 40 years, it has since been revised four times: in 1982, 1987, 2002, and most recently in 2014. However, the latest revisions to the test have been by far the most comprehensive. For example, the newest version test is not only more challenging in terms of content and assessing higher order thinking, but it was designed with students' college and/or career readiness in mind; in addition, it is available only on computer

(Hoffman, Wine, & McKinney, 2013; Martin, 2014).

Yet another important change worth noting is the addition of two alternative assessments that were released in 2014, which are also used to award a HSE. The first alternative, the High School Equivalency Test (HiSET), was developed by Educational Testing Service (ETS) and is currently available in 14 states. The second alternative, the Test Assessing Secondary Completion (TASC), was designed by McGraw-Hill and is available in five states. Both of the alternative assessments offer the test on both paper and computer, whereas the GED is available only on the computer. Since the move to the 2014 GED test, as well as the release of the alternatives noted above, states have continued to change the assessment(s) they offer. In addition to the option for two testing formats (paper or computer), the alternative assessments tend to be less expensive, although the exact cost can vary by state. Table 1, below, shows a breakdown of HSE tests and where they are offered, current as of June 2015.

A second important topic area for this review of the literature is to establish what is known about adults' computer use and comfort. Regarding both comfort with and use of technology, previous research has already demonstrated what Kontos, Bennett, and Viswanath (2007) described as the "digital divide," or the growing disparity among people of higher socioeconomic standing possessing greater access and usage of the internet compared to those of lower socioeconomic standing (Brown, 2011; Hargittai, 2002). While it may be true that the internet is available to all, previous research has found that low-income individuals tend to have less access to computers and lower computer skills overall (Araque et al, 2013; Guillen & Suarez, 2005). This may result in greater computer anxiety, which Sivakumaran and Lux (2011) described as "resistance, fear or anxieties

toward computers”; the authors also noted that, for many adults, learning both test content *and* new technology skills simultaneously can be a daunting task (p. 155). An earlier study by Bohlin and Hunt (1995) found that adult learners lacking in computer skills experienced more frustration and anxiety; however, one’s willingness to use the computer, perceptions of how effective the process was, and having some level familiarity helped to reduce these negative feelings. One’s aversion to computers may stem from a general lack of understanding regarding actual use; further, some adult students may have had no prior need to use a computer or simply may not have had access to one (Sivakumaran & Lux, 2011).

George-Ezzelle and Hsu (2006) carried out a study of computer familiarity among 539 GED test candidates ages 16-69. The researchers mailed surveys to a random, stratified sample of 5,000 U.S. test candidates drawn from the GED database. In this study, the results of the survey indicated that more than 62% of the respondents had experience with computer-based testing; further, while 63% reported having access to a computer in the home, 12% reported that they did not use one at all at the time of the study. Another interesting finding from George-Ezzelle and Hsu’s study was that 67.5% of the survey respondents stated they would have preferred a computer-based test, and that 96% reported they would still take the test if it were available only on the computer. One of the most notable takeaways from this study, however, was the analysis by age, which showed that younger students (those under 30) reported higher levels of computer knowledge, comfort, and willingness to test on the computer.

A variety of other studies have addressed the computer literacy needs of adult learners. Sivakumaran and Lux (2011), for example, developed a three-step process for assisting adult learners with

successful technology integration and use. Although this process was designed for adults within a higher education context, it will be applicable to students of adult basic education programs as well. The first step is to recognize and demonstrate practical uses of computers to provide adult learners with positive experiences (Mayhorn, Stronge, McLaughlin, & Rogers, 2004). The second step is to create a positive learning environment, which can be achieved through workshops and training in a computer lab staffed by patient and knowledgeable instructors who encourage learners (Jones & Bayen, 1998). Step three entails providing an ongoing support system for students, whether that is a staff person, instructor, or tutor.

The third broad area useful for framing the purpose of this study is the skillset needed for (or expected of) those who hold an HSE credential. Beyond simply the content and technical aspects of preparing students, it is useful to recall the purpose of a credentialing test such as the GED, HiSET, or TASC: to provide a high school equivalency diploma. Yet, prior to the changes in 2014, some economists were critical of this type of credential as to whether it was actually equivalent (Cameron & Heckman, 1993; Murnane, Willett, & Tyler, 2000; Rumburger, 2011). De Carvalho and De Castro (2011) elaborated on one of the key challenges, noting that potential employers, postsecondary institutions, or the military, for example, can differentiate between those with a credential (such as the GED) and those without one, using this information as a signal about the expected productivity or ability of individuals holding that credential.

To be sure, standardized exams, such as the GED, may be valid and reliable measures of cognitive/knowledge skills (arguably, the most important skills). Yet, multiple studies have demonstrated that

these tests fail to emphasize *non*-cognitive skills and abilities important to one's performance, such as motivation, self-esteem, or self-control (De Carvalho Andrade & De Castro, 2011; Cawley, Conneely, Heckman, & Vytlačil, 1996; Heckman, LaFontaine, & Rodriguez, 2008). The problem, however, is having a standard which *only* signifies cognitive/knowledge skills, while neglecting to account for other abilities, skills, or characteristics (see Rumburger, 2011). Some research has suggested that establishing higher standards, such as those implemented in 2014, may actually result in a less-qualified labor force. This is due to the fact that individuals with skills lower than those emphasized in the cognitive test, though they may possess higher *non*-cognitive skills, may be no longer qualified to pass it or even make the effort to reach the new standard (De Carvalho & De Castro, 2011).

To address this issue, the test's developers now have *two* levels of passing: those who meet the traditional HSE level and a GED Score with Honors, which reflects performance in line with college/career readiness ("2014 GED"). However, as Rose (2013) points out, "the traditional level will be symbolically rendered even more of a second class certificate" (p. 47). As such, De Carvalho Andrade and De Castro (2011) recommended working toward greater alignment between the skills needed to pass exams and the skills that are actually needed in the job market, which one may argue is achieved with the content and format of the new GED test. However, in viewing the current assessments as equivalents, this does raise the question as to what additional training, support, or skill development adult basic education students may need.

The research reviewed in this section provides an important backdrop to the research objectives of the present study, which will consider: (1) stakeholder

attitudes toward the new computerized test; (2) the relationship between students' computer access, use, and comfort, and their attitudes toward the test; and (3) issues related to both high school equivalency diplomas and the demands of the new test. The following section reviews the research design, data collection, and analysis methods employed as these topics were considered, followed by an overview and discussion of the findings.

## Methods

This study employed a mixed methods research design by incorporating both qualitative and quantitative methodologies in order to address the research questions. Specifically, a concurrent embedded strategy was used, for which Creswell (2009) noted its:

use of one data collection phase, during which both quantitative and qualitative data are collected simultaneously. [However], unlike the traditional triangulation model, a concurrent embedded approach has a primary method that guides the project and a secondary database that provides a supporting role in the procedures (p. 214).

Given the interest in studying the two programs and participants at an in-depth level, this study was designed with a qualitative approach in mind. It was determined to be the most useful for describing the experience of preparing for a new HSE test. This approach also fits into Morse's (2003) typologies of mixed methods research, specifically following the "QUAL + quan" design, which indicates a study that is qualitatively driven but carried out simultaneously or concurrently with the quantitative component (Morse, 2003, p. 198).

## Program Descriptions

The two programs involved in this study are located in a southern state within the same county, serving an urban-suburban adult basic education population. These programs were selected because both (1) are free and open to the public, (2) serve adult students of all ages who are 18+, (3) have operated successfully for more than two decades, demonstrating an established record of previous success, and (4) offered multiple class times and locations throughout the local area, which was thought to be more representative of the larger student population. Further, these programs were selected because (5) one is a federally and state-funded program while the other is a 501(c)(3) nonprofit funded solely by grants and donations, providing two possibly differing perceptions from staff on the changes. Lastly, the two programs involved in this study were selected because they (6) report having a “good working relationship” with one another, in that each will refer students to the other’s program if it is believed the student would be better-served by the scheduling, location, or teaching approach taken by that program. The directors are in regular communication with one another, and knew that the other was participating in this study.

Program A is the largest program in the county, receives federal and state funds, and serves approximately 500-600 students seeking their HSE during the quarters reported. Program A offers several class schedules; all class scheduling options meet either one or two days a week, with the in-class time commitment ranging from four to eight hours per week. Additionally, this program employs one Program Supervisor, one full-time teacher, and five part-time teachers.

Program B, conversely, is a smaller program, serving approximately 20-25 students seeking their

HSE at any given time. Program B, a non-profit 501(c)(3) organization completely funded by grants, donations, and fundraising efforts, and offers its classes on a two-day, four hours-per-week schedule. This program employs an Executive Director, a Program Director, and between five and ten part-time and volunteer teachers at any given time, who work between two and ten hours each week. At the time of this study, both programs operated in a completely paper-based manner, in that neither utilized instructional technology in the classroom nor offered technology training to students.

## Participants, Data Collection, and Analysis

Data were collected from both programs and included three groups of participants: administrators, teachers, and students. However, it should be noted that, although all individuals from both programs were invited to participate, only administrators and teachers from Program B, and students from Programs A and B, participated in this study.

First, it is useful to consider administrator input, as these individuals are responsible for overseeing program operations, communicating with funders about program success and future planning, and have the greatest knowledge about the program as a whole. Both administrators (the Executive Director and the Program Director) from Program B participated in one-on-one, semi-structured interviews; however, as noted above, the Program Supervisor and support staff from Program A did not participate in this study. Administrator interview protocols were developed in advance, with the intention of collecting information regarding (1) their opinions of the new test, (2) anticipated planning issues, (3) program needs and challenges as they pertain to the new test, and (4) student needs and characteristics. Two colleagues

with expertise in adult education reviewed these protocols for clarity and appropriateness of questions for meeting the research objectives.

Second, as the primary point of contact for students in the program, instructors play an important role in designing and teaching adult education courses and communicating information to students. To collect responses and information from instructors, two focus groups were held at two different class locations and, in all, six out of seven teachers from Program B participated in these meetings. Focus group questions were semi-structured and guided participants through a discussion of: (1) their opinions about the changes to the test (particularly with regard to the new computer-based format), (2) perceived program and teacher needs, (3) classroom operations, and (4) student characteristics, challenges, and abilities. Each focus group conversation lasted approximately one hour and, for nearly all of the questions, all focus group participants responded to and/or elaborated on one another's responses.

All interviews and focus group discussions were audio-recorded and fully transcribed. Transcripts were then reviewed twice by the researchers comparing the audio files to the accompanying text to check for accuracy prior to being moved into Nvivo10 for analysis. Nvivo is a program which supports both qualitative and mixed methods research, and can be used to analyze data via search, query, and mapping tools to identify connections among sources. In this assessment, Nvivo was used to code data based on nine key nodes as they emerged: "administrator involvement," "class descriptions," "concerns," "needs," "the new high school alternative," "next steps," "opinion of changes," "program changes," and "student descriptions." In order to ensure the codes were representative of the content discussed by participants, the query feature was used to conduct

a word analysis, and a word cloud was generated to visually represent the most common words in the data. Based on these analyses, some of the most commonly used words were "students," "changes," "test," "challenges," and "program." which appear to be in line with both the research questions and the established nodes. The use of qualitative data analysis such as Nvivo afford researchers and those reviewing their work greater transparency about the process and the findings, and support the ability to follow and verify steps taken in the research process. Data collected from administrators and teachers were used to address research questions one and three.

The third group of participants for this study was made up of students across both programs and data from these individuals were collected via a paper-based survey distributed to students during all classes taking place during a given week. Students received a copy of the survey in their classes, along with a letter explaining the purpose and scope of the study and that no identifying information would be collected; this letter also outlined how the findings would be used and stated that their participation was strictly voluntary. Students who opted to participate completed a 36-question survey containing a mix of quantitative and open-ended (write-in response) items designed to collect information about their (a) computer use and comfort, (b) opinions about the new test, and (c) interest in receiving and participating in future training and services.

Items pertaining to computer use, comfort, and attitudes toward computer-based testing were adapted from George-Ezzelle and Hsu's (2006) study on computer familiarity among GED test candidates. In their study, George-Ezzelle and Hsu included eight computer tasks, which were adapted and expanded for use in the present study; a comparison of these two instruments' items may be found in the appendix.

Prior to distributing the survey, three colleagues with extensive knowledge of adult basic education and three students completed the survey using a cognitive interview or “think-aloud” approach as described by Presser et al (2004), which is “used to produce reports of the thoughts respondents have either as they answer the survey questions or immediately after” (p. 112). This approach allowed the researchers the opportunity to ensure that all survey items were stated clearly for the information sought, as well as to determine approximately how long the survey would take to complete.

In all, 225 students were invited to participate; 124 students from Program A and 19 students from Program B completed surveys, totaling 143 respondents for a response rate of 63.55% across both programs. Of the 143 students who completed the survey, 33.6% were male, 55.9% were female, and 10.5% did not respond to this question. A majority of respondents (55.3%) reported that they were under the age of 29, while 22.7% fell between 30 and 39, 9.2% were between 40 and 49, and 12.9% were over the age of 50. Students also reported the highest grade reached before dropping out: 6% indicated that they had already earned a high school diploma; 9.7% had reached the 8th grade or below, 30.6% had reached the 11th grade (the largest group), while the remaining 53.8% were relatively evenly distributed between the 9th, 10th, and 12th grades. Complete demographic data from student respondents is exhibited in Table 2.

Quantitative survey responses were coded and entered into SPSS; prior to analysis, the data were cleaned, missing values reexamined, and all responses were re-checked against a codebook by both researchers for accuracy. Open-ended survey responses were entered into Microsoft Excel for coding and further analysis. Major themes were

identified by first tracking the frequencies of generalized statements. For example, item 22 on the survey asked students, “What is your opinion about the new test?” To analyze student responses to this question, written answers were tracked and organized by frequency to identify which generalized responses were mentioned most. Following this procedure, individual responses for major themes were reviewed to determine if there were any additional sub-themes that emerged. This process was repeated for all of the open-ended items in the survey.

As for additional quantitative analyses, a chi-square test was first employed to examine if having a computer at home would help more participants to take a computer-based test. Thirteen items on the survey asked respondents to indicate their levels of comfort in completing various computer tasks. The level of comfort was measured on a four-point Likert scale from 1 to 4 and included a not-applicable point of zero (“I have never done this.”). Scale points included: (1 = “Very Uncomfortable”); (2 = “Somewhat Uncomfortable”); (3 = “Somewhat Comfortable”) and (4 = “Very Comfortable”). Table 3 exhibits descriptions of each item as well as means and standard deviations.

There were a number of missing values in these 13 items measuring the students’ level of comfort. Therefore, instead of summing all the responses, intact scores were aggregated and averaged for individual students as the overall comfort scores ( $M= 2.8$ ,  $SD= 1.1$ ), indicating only a moderate level of comfort. The level of comfort was analyzed by using two different statistical techniques. A two-sample t-test was used to examine if there was any statistical mean difference between participants who had computers at home and those who did not have computer at home. A One-Way Analysis of Variance (ANOVA) was conducted to assess if there was any

difference in the level of comfort across different age groups. The following section outlines key findings from this study.

## Findings

Again, the research questions for this study asked: (1) what were the attitudes held by key stakeholder groups about the new test leading up to its implementation?; (2) what is the relationship between students' computer access/comfort and their perceptions of the new test?; and (3) how did these programs plan to address emerging student needs and adequately prepare these individuals for earning their high school equivalency via the GED?

### All Participant Groups Were Skeptical of the New Test

The major findings related to the first research question was a strong sense of skepticism among administrators, teachers, and students about the 2014 GED, particularly with regard to its new, computer-based format. Data used to answer this research question were drawn from interviews, focus groups, and the student survey. During interviews, administrators discussed at length the challenges associated with shifting from a paper-based to a computer-based test, as well as their concern over the increase in both cost and difficulty. When it came to sharing information with teachers, information appeared to be communicated fairly well. Four of the six instructors indicated that they were well-aware of the major changes to the test prior to the change. One teacher noted, "I learned about [the new test] in a training class I attended; "yet," she continued, "I was very dismayed to hear about these changes." Another teacher stated, "My guess is that most of [the students] don't even have access to the internet. From taking the test on the computer to the increased

cost, it just seems like it's one barrier after another that keeps students from being able to take [the new GED]." When asked how they reacted to learning about the move to a computer-based test, two teachers stated their first thought was, "Oh no!" Elaborating, one teacher explained, "[These students] may not know how to use computers and they may not know how to type. That may be something *else* that they have to learn before they can even do the test... and what they have to do to be able to pass." None of the administrators or teachers believed a computer-based test would be beneficial to the students currently served by these two programs.

In the survey, students were also asked directly what their opinion was about the new test, and many of the responses aligned closely with those shared by the administrators and teachers during interviews and focus groups, respectively. The top three response categories to the question, "What is your opinion of the new test?" generated a wide range of responses, as shown in Table 4, below. However, a majority of the responses to this item (which were the three most common general response categories), were related to student concerns about the cost of the test (23%), the difficulty of the test (19%), and testing on the computer (14%).

### Students' Computer Use and Comfort May Present Additional Challenges

In the survey, students were asked several questions which related not only to their computer use and comfort, but also about computer-based testing. In order to answer the second research question for this study, student responses to these survey items were analyzed. Among respondents, 57.7% had some experience with computer-based testing, while 42.3% had none. Nearly half of students indicated a preference for paper-based testing (49%),

as compared to those with a preference for computer-based testing (26.6%); the remaining respondents indicated they did not have a preference either way (24.5%). Students also reported that, while many would be likely to take the test even if it were offered on a computer (78%), the rest would be unlikely to attempt the test at all (22%) if that was the only option. Moreover, the results of a chi square test show that students are more likely to take a computer-based test if they have a computer at home ( $\chi^2 = 4.19, p < 0.05$ ).

Among survey respondents, 60.1% reported that they do have access to a computer within their home; an additional 32.2% indicated they could access a computer at the home of a friend or relative, the public library, work, or school, although 7% reported that were unable to access to a computer anywhere. Interestingly, even among those *with* access to a computer, 17.5% reported that they do not use it at all; 51% use a computer for 1-2 hours each week, 18.9% use it for 3-4 hours, 2.8% for 7-9 hours, and 9.8% use a computer for more than ten hours each week.

The analyses suggest that the overall comfort scores for various computer tasks varied by having a computer at home ( $M = 3.0$ ); the difference between these two means was significant at the Alpha level ( $p < 0.05$ ) in a t-test analysis. Older students were more likely to have lower overall comfort scores. The overall ANOVA main effect was found to be statistically significant ( $F(3, 136) = 12.4; p < 0.01$ ). These disparities are particularly notable when comparing means for age groups separated as 39 and under and over 39. The mean differences were statistically significant ( $p < 0.05$ ) across these two age groups in the Tukey Post-Hoc test. Table 5 includes the overall comfort score summary by age group along with the standard deviation for each.

## The New Test Would Bring Inevitable Changes

In order to answer the third research question, which asked how these programs would need to change to meet new and emerging student needs, data from interviews, focus groups, and student surveys were used. Three important findings related to this question emerged. First, it is necessary that programs understand their students and the support they need. Second, both students and teachers desire additional training and support. Third, programs need to educate the community

**The importance of understanding students and their needs.** During interviews and focus groups, teachers and administrators were asked to describe the “typical” student in the program. Nearly all (both administrators and six of the teachers) stated it was “difficult to label them,” adding that “they come from all walks of life,” and “there is no typical student.” The teachers and administrators did describe some of the common challenges they face, however: “They all seem to come from some sort of struggle... and overcome something just to be [in the program].” Elaborating on that point, one administrator added, “Most of them have a full-time job and may have a family and they most likely have a low wage job so they have financial struggles.” A teacher attempted to explain the challenges they faced even in completing the program: “For some of them, this is their time for school, so when they come... this is their time... many of them do only what we accomplish here in our two hours twice a week.”

As administrators and teachers continued to describe the students, a sub-theme that emerged was one that described almost a different way of thinking for these students as they work toward earning their HSE diploma. As one focus group participant stated, “It’s like a guidance counselor in high school telling

[you] how to apply for college and all of that... [these students] have to have handholding.” She continued by adding that she even goes with them to sign up for the GED because “sometimes they can’t even walk into the GED office by themselves and sign up for the test. I have to meet them there and call them on the way to make sure they are coming to meet me.” Other participants echoed these sentiments: “It’s not like you’re dealing with regular high school students that come in probably thinking they are going to go beyond high school. These folks don’t think that way,” while another added, “I just don’t think they can see beyond tomorrow. They may think they’re going to get their GED this year, but that’s as far as it goes.” Yet another participant made nearly the same point: “Our students... can’t think about what they’re going to do after they get their GED because... getting their GED is all they can focus on at the time.” Two teachers described the sensitive nature of some of the students enrolled in the program, noting: “Anything that might discourage them from taking the test [results in] a definite possibility they would drop out of the program,” and “[many students] are older and having to come back to school; it’s hard, I think, to even motivate themselves to come to class.”

During the teacher focus groups and administrator interviews, these participants were also asked to describe (1) how classes were currently structured and (2) what they believed students and teachers would need moving forward. Both of the administrators and three of the six teachers expressed a strong desire in helping students to develop their computer and technology skills. One of the teachers from the first focus group believed that students have a need for developing specific computer skills, such as keyboarding and “getting generally more accustomed to technology.” Another teacher from the same group indicated that she was uncertain

if local programs were even set up yet for students to come in and take tests on the computer. A third teacher stated, “If [Program B] included some sort of training in using the computer, it would be a great thing for [the students].”

**Desired training and support.** Several survey items were included to: (1) gauge student interest in additional training and (2) determine the topics that were of the most interest. Among student respondents, 83.7% were “very interested” and 12.8% were “somewhat interested” in attending a class to help them prepare for their next steps after earning a high school diploma; only 3.5% expressed no interest in attending such a class. When asked about the topics they were most interested in, students indicated a strong preference for college and career-related services. The three highest-rated training or assistance programs were in the areas of: matching interests and skills with a job or career (65%), identifying an educational program to match interests and skills (61.5%), and simply learning how to search for a job (59.4%). Table 6 illustrates each area of interest and indicates the proportion of students indicating interest in the particular topic.

While students are the primary focus of a program and its services, teachers and administrators alike identified several resources and services that may benefit instructors, specifically. One focus group participant stated, “It would be beneficial to...get together the teachers around the county and maybe spend an hour or an hour and a half to talk about how we can go about teaching certain things. I would like to know... if there are other methods that people are using, and to have reinforcement about some of that.” Three additional teachers agreed that this would be beneficial for them regarding their interactions with students. One of the administrators noted, “We don’t have a lot of resources and pay a low wage [to

our instructors]. We'd like [the teachers] to have experience in education and an education degree, but we are flexible." Of the six teachers who participated in the focus group, none had a background and formal training in education.

**Educating the community.** When asked about how the new test may impact the program as a whole, the primary concern for the two administrators was how to most effectively use the limited resources available to best meet students' needs. Administrators were asked to share their opinions about having an alternative HSE test available in the state, such as the HiSET or TASC. The program's director stated that the biggest concern was simply "to help employers, schools, the general public, and even the students to understand that, in theory, [an alternative test] would be the equivalent to the GED... it won't hinder [students] if they have [the alternative diploma]. It's supposed to be the same thing, so a role that [programs] can play is to educate the community. What is this new test? What does it mean? Is it the same? What's different? ...Just getting people to accept that. All of the promotional materials say 'Get your GED and quote how many students don't have a GED, so I think it would be a mind shift [with] any new test.'" The following section discusses these findings and important implications for practice.

### **Discussion and Implications for Practice**

The findings of this study raise five important topics of discussion. First, as the adult basic education landscape continues to change, it is important for scholars and practitioners to understand what drives these decisions. Second, given these ongoing changes, it is critical that programs do not lose sight of the needs of their students. While their end goal—to earn a high school equivalency diploma—remains

constant, these changes have resulted in new student needs which must be met in order to ensure their success both in and following their participation in a test preparation program. Third, just as students have had new training and support needs emerge, so have the teachers who work with these students every day. Fourth, it is critical that program administrators, staff, and teachers emphasize and value effective communication and regular sharing of information. Lastly, the importance of feedback and ongoing evaluation cannot be overstated.

### **Adult Basic Education Is Still Evolving**

There is not yet sufficient information in the literature regarding the full scope of the decisions (and their resulting impacts) related to states which opted to proceed with the new GED, an alternative assessment such as the HiSET or TASC, or some combination of the three. However, one can reasonably assume that two of the major issues behind these decisions are (1) computerized testing and (2) increased stakeholder costs, which may be financial or perceived difficulties. As states continue to finalize their future plans for adult basic education programs, it is likely that issues related to computerized testing (e.g. infrastructure, cost of testing centers and maintenance, professional development for teachers, and costs of additional computer-related preparation for students) have and will continue to play a role in these decisions.

One of the objectives of this research was to better understand the attitudes held by ABE program administrators, teachers, and students in the face of the new GED test, which is available only on computer. This marks a critical issue that programs have had to address given that there is now no paper-based version available. By the time this study had concluded, fifteen states had opted to either switch to an alternative assessment entirely or offer multiple

options for students. By late 2014, there were still 35 states (plus Washington D.C.) still offering only the GED, leaving essentially no options for teachers and students in these states *except* to adapt to the change. Yet, as more time passes, these numbers continue to shift. This raises an important question for future consideration: what impact will the attitudes and satisfaction rates among administrators and teachers have in the remaining GED states? From fall of 2014 to summer of 2015, two more states ceased to offer the GED test. This is also of interest for instructors, as they are the primary point of contact for students and those who set the tone for the class and convey important information to students regarding test. As programs continue to fully adapt to the requirements and format of the new GED, it will be important to understand not only the ways in which administrators are thinking about the change, but also what additional services will be beneficial to students. It will also be of interest to know if, and to what extent, student attitudes, confidence and, of course, the computer literacy skills needed for testing will impact their performance on the new GED.

When examining perceptions toward the new test, it is also worthwhile to follow this information from the students' perspective. With regard to students' computer comfort and attitudes toward computer-based testing, the findings of this study were clearly consistent in some areas, but rather conflicting in others, to those reached by George-Ezzelle and Hsu (2006). The sampling and response rates of these two studies, indeed, were quite different; while George-Ezzelle and Hsu utilized a random, stratified sample and achieved a response rate of 11%, the researchers of the present study utilized a convenience sample and obtained a response rate of 64%. The proportions of students having some experience with computer-based testing was similar

(62% vs 58%) as were the proportions of respondents with computer access in their home (63% vs 60%) when comparing the results of George-Ezzelle and Hsu's findings with those of the present study, respectively.

However, in comparison to George-Ezzelle and Hsu's findings, the respondents in this study reported strikingly lower responses with regard to how many would prefer computerized testing (65.7% vs 26.6%). The only difference in the question was that this study included a "no preference" option to George-Ezzelle and Hsu's forced response. Nevertheless, even if all of the respondents in the present study who indicated they had no preference (24.5%) were moved to the computer-based preference response group, this number would be considerably lower. Further, while George-Ezzelle and Hsu's findings indicated that 96% of respondents would still be likely to take the test if it were available only on computer, this study's finding of 78% is notably less. The discrepancies in these findings suggest further investigation is needed into the attitudes of GED test candidates in terms of how many students may not even be entering a test preparation classroom as a result of their concerns about computer-based testing.

### **Students Have Emerging Interests and Needs**

The data in this study also revealed that students do have clearly identified needs with regard to developing their skills and abilities. While findings indicated that the teachers and administrators in this particular context underestimated student technology skills and access to computers, there are still technology-related services from which students could clearly benefit. Students expressed a strong interest in developing their skill sets and acquiring information about continuing education and future

careers. These are important considerations for adult education programs as they continue to adjust to the new GED test (or alternative assessment), particularly as new student needs are continually realized. This desire for training supports the findings derived from Quigley, Patterson, and Zhang's (2011) study of 75 students who transitioned from their GED credential to postsecondary education. In their discussion, the authors noted, "[students] would have benefited from clearer, more timely information on the local postsecondary institutions—perhaps from the GED test preparation program or GED Testing Center—even before they knew they had passed the test" (p. 11).

Programs that opt to make technology training courses available in the future should consider a variety of topics and workshops designed to further students' skill development. For example, some students may have a basic understanding of computer use, but could benefit tremendously from an introductory typing class; those who are less experienced with computers would likely need a beginner's level covering basics such as cutting, pasting, and using a mouse.

Across the areas of postsecondary education, career and employment assistance, and life skills and personal development, the topics of interest reported in this study could serve as a starting point for these kinds of offerings for the programs not already providing such options. Yet another consideration programs may want to keep in mind is to incentivize students to participate in these types of training options. Many ABE programs have traditionally paid a portion or all of the testing costs for a student to obtain his or her GED. One option would be to offer a testing cost scholarship to students who complete the additional training. For example, some programs may only have enough funding to pay 50% of the

testing costs for students. In the event these programs receive a grant or additional state funding to offer new computer classes; perhaps a portion of that funding could be set aside to cover some or all of the remaining portion of the testing cost for students who participate in and complete the training. This possibility was being considered in Program B at the close of this study.

### **Teachers Also Need Support**

It should also be noted that the instructors who participated in this study had not completed any professional development or received any instructional support training with the exception of a brief orientation workshop when they made the commitment to work with GED students. Research in the field of adult basic education suggests that this situation is not unique. That is, other studies have demonstrated that many ABE instructors do not hold education credentials, may lack a thorough understanding of the testing content, and oftentimes have not received any training or education in working specifically with adults (Belzer, 2005; Smith & Gillespie, 2007). Therefore, it is recommended that program administrators consider the type of information, training, or support that would be most useful to instructors and integrate this into their orientation. It would also be beneficial to create opportunities or support participation in professional development regarding subject matter and content, as well as effective teaching strategies. In certain cases, it could prove beneficial to develop a volunteer skills assessment to optimize placement and matching with students based on volunteer preferences and student needs.

## Effective Communication and Sharing Information Benefits Everyone

The findings of this study also indicated that students may need additional information with regard to program changes. Prior to the transition to the new test, students received information from their teachers about updates in the class and the future of the GED. While much of the information students did receive was accurate, student *and* teacher responses indicated that incorrect information had been shared and repeated, suggesting a possible need for additional, formal information updates directly from the program itself. However, given that many students reported not having a computer in their home and thus greater difficulty in accessing web-based information, programs should consider alternative ways of conveying this and other updates to students. This could take the form of a program representative coming to the class to talk to students, informational handouts created by a program administrator or representative, or periodic mailings sent to students' home addresses. In any case, it is necessary that programs identify an effective strategy for conveying complete and accurate information to students, as well as the community, in a way that is easy to understand and supports program goals. As this study has demonstrated, not all students will be able or know how to access this information online.

As previously noted, the two programs that participated in this study already partner to some extent. However, there are other programs in close proximity, bringing additional opportunities for partnering in other areas as well. Some of these areas could include: the development and maintenance of lessons and classroom materials, volunteer/teacher exchanges, shared professional development opportunities, and seeking new joint program funding. Further, if one service provider is already offering additional student training or support, it

may be possible to consider cost sharing by moving the class location to other programs in order to avoid the duplication of efforts and service. Programs that already collaborate may be able to identify new ways to work together and reduce costs in times of constrained budgets. As the two programs that participated in this study and countless others across the country adjusted to the changes brought by the new GED test, seeking such opportunities may be not only beneficial, but necessary.

## Feedback and Evaluation Are Critical

Finally, the use of ongoing program assessment and evaluation is one way of addressing the issue of effective communication, as well as other important areas of concern such as: understanding the student population, generating meaningful data for seeking program funding and support, identifying program areas that could be improved through redesign or eliminated, and addressing other specific areas of concern within an organization or program. Smaller-scale program evaluations can be an effective and methodical way of addressing applied research questions pertaining to program improvement (Bloom, 2010). Through regular assessment and evaluation, programs can enhance communication with staff, participants and other stakeholders, as well as check assumptions about the needs and preferences of students and teachers. As mentioned in the findings, the teachers did not accurately gauge the extent to which students had access to computers or how comfortable they were using computers. Collecting feedback from students, teachers, volunteers, or community partners can be an effective way of checking such assumptions. The methods employed in this study could serve as one model for other programs interested in collecting information from key stakeholders.

## Conclusion

The primary limitation of this research was the low participation from Program A's supervisor and staff. Without having sufficient participation from the administration and teachers at program A, it cannot be known how this input would have changed the context of the study. While the high student participation from Program A certainly contributed much important information from the student perspective, it would have been valuable to have had the opportunity to include these other individuals. Although the participation in the focus groups involved six of seven teachers from Program B, teachers from Program A were absent from these groups, possibly limiting the discussion or omitting perspectives that were not considered among those who participated.

It will be useful for future research to investigate attempt and pass rates across states, particularly comparing those offering one or more alternative assessment. Other researchers may want to consider the ways in which states only offering the GED have and continue to address the challenges associated with technology integration in the classroom and enhancing student preparation to take a computer-based test. Lastly, given the discrepancies between this research and that of George-Ezzelle and Hsu's (2006) study, more research will be needed in student use, comfort, and access to computers, and the way that this impacts their participation in computer-based testing. ❖

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## References

- 2014 GED Test Performance Standards. (2014). *GED Testing Service*. Retrieved from: <http://www.gedtestingservice.com/uploads/files/458b4f8953ae91f6eb6959b34156bac9.pdf>.
- Araque, J. C., Maiden, R. P., Bravo, N., Estrada, I., Evans, R., Hubchick, K., Kirby, K. & Reddy, M. (2013). Computer usage and access in low-income communities. *Computers in Human Behavior*, 29(4), 1393-1401.
- Belzer, A. (2005). Improving professional development systems: Recommendations from the Pennsylvania Adult Basic and Literacy Educational Professional Development System Evaluation. *Adult Basic Education*, 15(1), 33-55.
- Bloom, D. (2010). Programs and policies to assist high school dropouts in the transition to adulthood. *The Future of Children*, 20(1), 89-108.
- Bohlin, R. M. & Hunt, N. P. (1995). Course structure effects on students' computer anxiety, confidence, and attitudes. *Journal of Educational Computing Research*, 13(3), 263-270.
- Brown, J. H. (2011). *Exploring how urban older adult participants of a computer training program learn, use, and make sense of computer technology in their everyday lives*. (Unpublished doctoral dissertation). University of Wisconsin, Milwaukee.
- Cameron, S. V. & Heckman, J. J. (1993). The nonequivalence of high school equivalents. *Journal of Labor Economics*, 11(1), 1-47.
- Cawley, J., Conneely, K., Heckman, J., & Vytlačil, E. (1996). Measuring the effects of cognitive ability. *NBER Working Paper Series, No. 5645*. Retrieved from: [www.researchgate.net/publication/237252942\\_MEASURING\\_THE\\_EFFECTS\\_OF\\_COGNITIVE\\_ABILITY](http://www.researchgate.net/publication/237252942_MEASURING_THE_EFFECTS_OF_COGNITIVE_ABILITY).
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods Approaches* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage.
- De Carvalho Andrade, E. & De Castro, L. (2011). Tougher education exam leading to worse selection. *Economics: The Open Access, Open-Assessment E-Journal*, 5(17), 1-24.
- George-Ezzelle & Hsu (2006). GED candidate computer familiarity survey. *GED Testing Service Research Studies, 2006-2*. Retrieved from: <http://www.gedtestingservice.com/uploads/files/6d50a6844b133839246045eae3eafe23.pdf>.
- Guillen, M. F. & Suarez, S. L. (2005). Explaining the global digital divide: Economic, political, and sociological drivers of cross-national internet use. *Social Forces*, 84(2), 681-708.
- Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, 7(4). Retrieved from: <http://firstmonday.org/ojs/index.php/fm/article/viewArticle/942/864Head>.
- Heckman, J., LaFontaine, P., & Rodriguez, P. (2008). Taking the easy way out: How the GED testing program induces students to drop out. *NBER Working Paper, No. 14044*. Retrieved from: <http://www.nber.org/papers/w14044>.
- Hoffman, A. M., Wine, M. P., & McKinney, J. S. (2013). A GED test for a common core world: Understanding the changes coming in 2014. *Paper presented at the Annual Meeting of the American Education Research Association*. San Francisco, CA. May, 2013.
- Jones, B.D. & Bayen, U.J. (1998). Teaching older adults to use computers: Recommendations based on cognitive aging research. *Educational Gerontology*, 24(7), 675-689.
- Kontos, E. Z., Bennett, G. G., & Viswanath, K. (2007). Barriers and facilitators to home computer and internet use among urban novice computer users of low socioeconomic position. *Journal of Medical Internet Research*, 9(4), e31.
- Martin, L. G. (2014). A new model for adult literacy education: Technology-based concept mapping in GED preparation. *Proceedings of the 2014 Adult Education Research Conference*. Retrieved from: <http://www.adulterc.org/Proceedings/2014/papers/Martin.pdf>.
- Mayhorn, C. B., Stronge, A. J., McLaughlin, A. C., & Rogers, W. A. (2004). Older adults, computer training, and the systems approach: A formula for success. *Educational Gerontology*, 30(3), 185-203.
- Morse, J. M. (2003). Principles of mixed methods and multimethod research design. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 189-208). Thousand Oaks, CA: Sage.
- Murnane, R. J., Willett, J. B., & Tyler, J. H. (2000). Who benefits from a GED? Evidence from high school and beyond. *Review of Economics and Statistics*, 82(1), 23-37.
- Presser, S., Couper, M. P., Lessler, J. T., Martin, E., Rothgeb, J. M., & Singer, E. (2004). Methods for testing and evaluating survey questions. *Public Opinion Quarterly*, 68(1), 109-130.
- Quigley, A., Patterson, M. B., & Zhang, J. (2011). Perceptions and pathways: Life decisions of GED test credential recipients from secondary to postsecondary education. *American Council on Education*.
- Quinn, L. M. (2002). An institutional history of the GED. WI: University of Wisconsin-Milwaukee Employment and Training Institute. Retrieved from: <http://www4.uwm.edu/eti/reprints/GEDHistory.pdf>.
- Rose, M. (2013). Second chances: The value of adult education and the GED. *Kappan Magazine*, 94(6), 45-49.
- Rumberger, R. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Cambridge, MA: Harvard University Press.
- Sivakumaran, T. & Lux, A. C. (2011). Overcoming computer anxiety: A three step process for adult learners. *US-China Education Review B*, 1, 155-161.
- Smith, C. & Gillespie, M. (2007). Research on professional development and teacher change implications for adult basic education. *Annual Review of Adult Learning and Literacy*, 7(7), 205-244.

**Table 1**—*High School Equivalency Tests by State*

Test	States	Total
<b>GED only</b>	AL, AK, AZ, AR, CO, CT, DE, FL, GA, HI, ID, IL, KS, KY, MD, MI, MN, MS, NE, NC, OH, OK, OR, PA, RI, SC, SD, TX, UT, VT, VA, WA, WI, & Washington D.C.	33 states + D.C
<b>HiSET only</b>	IA, LA, ME, MA, MO, MT, NH	7 states
<b>TASC only</b>	IN, NY, WV	3 states
<b>GED + HiSET</b>	CA, NM, NC, TN, WY	5 state
<b>All 3 tests</b>	NJ, NV	2 states

*Note:* Participation in each testing program was confirmed directly via each provider in June 2015

**Table 2**—*Demographic Characteristics of Survey Participants*

Variable	Category	Proportion %
<b>Gender</b>	Male	33.6
	Female	55.9
	Missing	10.5
<b>Age</b>	Under 29	55.3
	30 - 39	22.7
	40 - 49	9.2
	50 or older	12.8
<b>Highest grade</b>	8th grade or below	9.7
	9th grade	17.2
	10th grade	20.8
	11th grade	30.6
	12th grade	15.7
	High school diploma	6.0
<b>Native English speaker</b>	Yes	85.1
	No	14.9
<b>Number of dependents</b>	No dependents	36.5
	1+ more dependents	63.5
<b>Employment</b>	Full-time employed	35.3
	Part-time employed	13.5
	Unemployed	51.2
<b>GED enrollment</b>	Less than 4 months	71.4
	5-8 months	15.0
	9-12 months	6.4
	More than a year	7.2

**Table 3—Computer Task Items: Level of Comfort**

<b>Survey Item</b>	<b>Mean</b>	<b>SD</b>
Surfing the internet	3.0	1.3
Sending and reading email	3.0	1.3
Typing a letter or story	2.5	1.4
Creating a resume	2.1	1.3
Chatting with instant messenger	2.6	1.4
Shopping online	2.2	1.6
Using social media (Facebook, etc.)	2.9	1.5
Playing computer games	2.8	1.5
Searching for information	3.2	1.2
Entering data or information	2.8	1.3
Using a handheld computer mouse	3.2	1.3
Cutting, copying, and pasting	2.6	1.4
Playing and watching videos	3.1	1.3

**Table 4**—*Responses to “What is Your Opinion of the New Test?”*

<b>General Response Category</b>	<b>Respondents</b>	<b>Proportion (%)</b>
Concerned about the cost	30	23.08
Concerned about the difficulty	25	19.23
Concerned about testing on a computer	18	13.85
Does not know anything about the new test	9	6.92
Concerned about the timeline/rollout of test	8	6.15
Overall negative feelings	7	5.38
Mixed feelings (both positive and negative)	6	4.61
Overall positive feelings	6	4.61
Believes the new test is more modern	4	3.08
Would like the test to stay the same	3	2.31
Glad the new test will be easier	2	1.54
Has no concerns about the test	2	1.54
Believes the change is unfair	2	1.54
Does not understand the change	2	1.54
Believes the new test is a bad idea	1	.77
Does not want the class location to change	1	.77
Believes people will be less motivated	1	.77
Just wants to earn a GED	1	.77
Likes that the test will be more difficult	1	.77
Concerned about class attendance policy	1	.77
<i>Total Responses to this item</i>	<i>N = 130</i>	<i>Total = 100%</i>

**Table 5—Average Overall Comfort Scores by Age Group**

Age group	Mean	SD
Under 29	3.1	0.9
30 - 39	2.7	0.9
40 - 49	2.2	1.2
50 or older	1.8	1.1

**Table 6—Student Interest in Training Topics Beyond the GED**

Question Category	Item Summary for Individual Topics	% Interested
<b>College and Continuing Education Topics</b>	Identifying a program that matches my interests/skills	61.5
	Help completing college applications	51.7
	Learning about financial aid and paying for college	50.3
	Learning about vocational or training programs	37.8
	Learning about college programs	35.7
<b>Employment, Career, and Job-Related Topics</b>	Matching my interests and skills with a job or career	65.0
	Searching for and finding a job I want	59.4
	Practicing my interviewing skills	41.3
	Help completing a job application or resume	35.0
	Learning more about professional dress & behavior	27.3
<b>Life Skill and Personal Development Topics</b>	Computer and Technology skills	53.8
	Goal-setting and making good decisions	51.7
	Improving communication and people skills	47.6
	Managing Money (budgeting, opening accounts, etc.)	36.4
	Time Management Skills	30.1

**Appendix—Adaptation of George-Ezzelle & Hsu’s (2006) Computer Comfort Survey**

Questions 4-12.  
At the time you took your last GED Test, how comfortable were you performing the following functions?

	Very Uncomfortable	Somewhat Uncomfortable	Somewhat Comfortable	Very Comfortable	I never performed this function.
4. Using email to communicate with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Playing computer games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Using a word processing program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Creating drawings on the computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Creating tables, charts, or graphs on the computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Finding information on the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Talking in chat groups or instant messaging with other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Filling out forms, surveys, or applications on the computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Ordering merchandise online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The figure above comes directly from George-Ezzelle and Hsu’s instrument.

The items below were adapted from those above and used in the present study’s survey on computer comfort:

	Very Uncomfortable	Somewhat Uncomfortable	Somewhat Comfortable	Very Comfortable	I have never done this
8. Surfing the internet	<input type="checkbox"/>				
9. Sending and reading email	<input type="checkbox"/>				
10. Typing a letter or story	<input type="checkbox"/>				
11. Creating a resume	<input type="checkbox"/>				
12. Chatting with instant messenger (using chatrooms)	<input type="checkbox"/>				
13. Shopping online	<input type="checkbox"/>				
14. Using social media (Facebook, etc.)	<input type="checkbox"/>				
15. Playing computer games	<input type="checkbox"/>				
16. Searching for information	<input type="checkbox"/>				
17. Entering data or information	<input type="checkbox"/>				
18. Using a handheld computer mouse	<input type="checkbox"/>				
19. Cutting, copying, and pasting text	<input type="checkbox"/>				
20. Playing and watching videos	<input type="checkbox"/>				

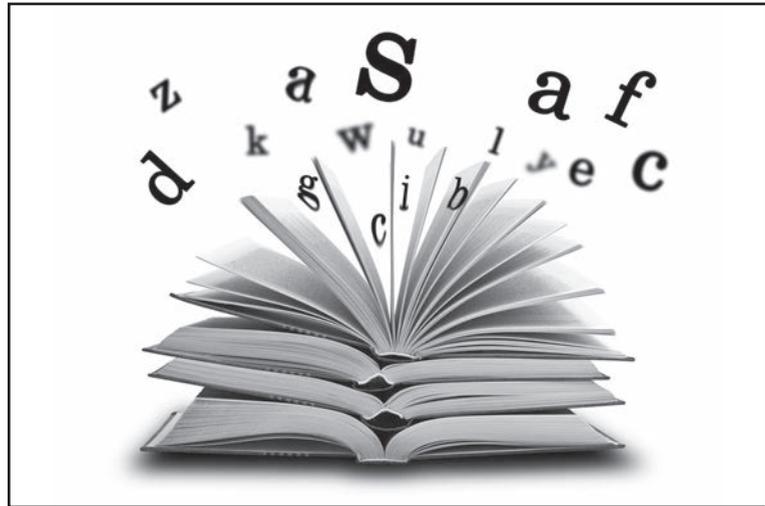
## PRACTITIONER PERSPECTIVE

# *Morphological Awareness Intervention: Improving Spelling, Vocabulary, and Reading Comprehension for Adult Learners*

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### **Abstract**

Adult Basic Education programs are under pressure to develop and deliver instruction that promotes rapid and sustained literacy development. We describe a novel approach to a literacy intervention that focuses on morphemes, which are the smallest meaningful units contained in words. We argue that if you teach learners that big words are comprised of smaller components (i.e., morphemes), you will provide those students with the skills to figure out the meanings of new words. Research with children has demonstrated that teaching them about morphemes improves word recognition, spelling, vocabulary, and comprehension (Bowers & Kirby, 2009; Kirk & Gillon, 2009; Nunes, Bryant, & Olsson, 2003). Our hope is that this type of intervention will be successful with adult learners, too.

## Introduction

Imagine being able to exponentially grow the vocabulary of your students by teaching them that most words are made up of smaller “pieces”—roots and affixes. This approach—the productive approach (see Stahl & Shiel, 1992), focuses on not only teaching a set of words, but also teaching something about those words that allow the learner to later figure out the meanings of newly encountered words that share “pieces” of those taught words. This approach relies on morphological awareness (MA), which has shown a great deal of promise in reading and writing development for children. Unfortunately, this knowledge has been less studied in adult settings. The purpose of this paper is to explain what morphemes and MA are and how this knowledge is related to a number of literacy skills as well as to describe an intervention for adult learners.

## Background

A morpheme is the smallest unit of meaning in a word. For example, the word *clocks* contains two morphemes - *clock* and *-s*. Affixes can change the quantity, tense, and meaning of the root word. The two most common types of morphologically complex words are inflected and derived words. Inflectional morphemes are suffixes that typically change the tense or quantity of a word. The most common inflectional morphemes are plurals (*-s* and *-es*), *-ed*, and *-ing*. These three suffixes account for approximately 65% of all suffixed words (White, Sowell, & Yanagihara, 1989), and, consequently, give students a good base of knowledge regarding morphologically complex words. Derivational morphemes consist of both prefixes and suffixes, and can change the meaning (*kind* to *unkind*) and/or part of speech (*run* to *runner*).

As literacy skills develop, readers gain MA, which is the conscious awareness that many words are made up of smaller components. The ability to understand and reflect on these smaller components is important

to literacy development. Anglin (1993) argued that MA provides readers with morphological problem solving skills, which allow readers to figure out the meaning of words. Using morphological problem solving to figure out the meanings of unknown words can increase both the size of one’s vocabulary and its rate of development. It is, therefore, not surprising that recent research has investigated MA for its role in reading development.

Not only has MA been implicated in vocabulary, but it also shares relationships with other literacy skills. Jarmulowicz, Hay, Taran, and Ethington (2008) examined the significant relationship between phonological and MA and found that phonological awareness has a greater impact on reading skills up until 3<sup>rd</sup> grade. MA then builds on phonological abilities and becomes a more important predictor of reading skills after 3<sup>rd</sup> grade and through the high school years. In addition, MA has been implicated in spelling abilities, which is important in an ABE context since spelling is a frequent complaint among adult learners (Dietrich & Brady, 2001). Finally, MA is also related to listening and reading comprehension for both children (Bowers, Kirby, & Deacon, 2010; Nagy, Berninger, & Abbott, 2006; Tong, Deacon, Kirby, Cain, & Parrila, 2011) and ABE learners (Herman, Gilbert Cote, Reilly, & Binder, 2013; Tighe & Binder, 2015; Tighe & Schatschneider, 2014; To, Tighe, & Binder, 2014).

There have been several morphological intervention studies conducted with children that have demonstrated increases in spelling, vocabulary, and reading comprehension. The studies differ in how they teach MA. Most interventions teach children that many words are made up of smaller parts—roots and affixes. Some of the interventions then spend the majority of the training focusing on teaching children how to segment words into the different morphemes (Arnbak & Elbro, 2000; Kirk & Gillon, 2009; Nunes, Bryant, & Olsson, 2003). These studies have shown increases in spelling, and

they argued that segmenting words into morphemes helps students spell by allowing them to spell one morpheme at a time.

Other interventions have focused more on the semantic aspects of morphology. For example, Bowers and Kirby (2009) highlighted the spelling-meaning connections between words. They did not focus on teaching specific affixes, but rather taught morphological families. For example, the words *instruct* and *construct* are related because they share the same root word. Some of their tools were word matrices and word sums to help demonstrate how morphemes work together to form a variety of words that are still related to each other in meaning (Bowers & Kirby, 2009). A word matrix helps to show all of the morphologically complex words that can be created from one root word by listing prefixes and suffixes that are associated with a given root. A word sum shows how whole words can be constructed from their constituent morphemes. For example, *pranc/e + ing* → *prancing* (the slash indicates a letter that is removed). Bowers and Kirby (2009) found that vocabulary increased significantly as a result of their intervention.

Other promising intervention studies have demonstrated growth in reading comprehension (Nunes et al., 2003, Wu et al., 2009). Thus, developing an appropriate morphological intervention for adult literacy students seems worthwhile given the relationships among MA, phonological abilities, word recognition, spelling, vocabulary, and reading comprehension, coupled with the research that demonstrates directly teaching MA to children produces significant increases in these skills.

## Project Description

### Participant Information

The participants involved in this intervention were from three ABE programs that met three to five days a week. All three levels of ABE were

represented with 20.9% in the Basic level (grade equivalent: K – 4<sup>th</sup>), 30.2% in the Pre-GED level (grade equivalent: 5<sup>th</sup> – 8<sup>th</sup>), and 48.8% in the GED level (grade equivalent: 9<sup>th</sup> – 12<sup>th</sup>). The programs use varying approaches to literacy instruction typically based on level and the students' needs.

The participants reflected a representative sample for an ABE population from Western Massachusetts. Sixteen males and 27 females ranged in age from sixteen to eighty-three years old with diverse backgrounds (31% Hispanic, 29% Black/African American, 29% White, 9% Other, and 2% Asian). The most common first languages spoken by the participants were English (65.1%) and Spanish (23.3%).

### Intervention Description

The purpose of this project was to develop an MA intervention to produce increases in spelling, vocabulary, and reading comprehension for ABE students. The intervention occurred over eight weeks with three, 20-30 minute lessons per week. The lessons were divided into four sections: the introduction, suffixes, prefixes, and word sums and matrices. The lesson format for the introduction and the affixes sections consisted of general discussion regarding the lesson focus including group-brainstorming to get students active in their learning. Then, the instructor led sample exercises followed by completion of worksheets. The word sums and matrices section provided a more exploratory look into the uses and changes affixes provide to various words.

**Week 1: Introduction to morphemes.** The three introductory lessons focused on defining the concepts of morphemes, suffixes, prefixes, compound words, contractions, and root words. A morpheme was defined as the smallest unit of meaning. Students were asked to think about adding pieces (i.e., -s) to a word, if it carries meaning, and how it changes a word. They were provided examples of several words that were either mono- or multi-morphemic, and

asked to identify the root word as well as the affixes—both prefixes and suffixes (See Table 1).

**Weeks 2-4: Suffixes.** Students studied the role of suffixes in morphologically complex words for three weeks (nine lessons). Students were told that suffixes add meaning to the root word. They were asked to consider how a suffix changed the meaning of the root word throughout every lesson. The first eight lessons focused on various suffixes organized by meaning or function: 1) plural; 2) verb endings; 3) suffixes that carry a “someone who” meaning; 4) suffixes that indicate a “state of being;” 5) suffixes that carry a “characterized by” meaning; 6) adjectives; 7) suffixes that indicate “quality of or related to;” and 8) suffixes that carry a “able to or become” meaning (See Table 1 for examples). In each lesson, students were provided with several examples that demonstrated how suffixes contributed to the overall meaning of the word.

The final suffix lesson was a review of all presented suffixes. The idea that a suffix’s meaning contributes to the overall word meaning was emphasized while recognizing the root word and suffix was further reinforced. Namely, students should identify the root word and determine its meaning. Once assessed, they can consider how the suffix may change the root meaning: 1) Did it change the part of speech (i.e., verb to noun as in *run* to *runner*)? 2) Did it change the meaning (e.g., *hope* to *hopeless*)?

**Weeks 5-6: Prefixes.** Six lessons were devoted to understanding the role of prefixes in multi-morphemic words and organized by meaning or function, including prefixes that :1) indicate number, quantity, and size; 2) carry the meaning “not” or indicate the opposite; 3) indicate location; 4) indicate time; 5) carry a “cause” meaning (See Table 1 for examples). For every lesson, the students were provided with many examples of words with these prefixes to accentuate the idea that the meaning of the prefix is stable, regardless of the meaning of the root word. The final lesson consisted of a review of

all previously studied prefixes.

**Weeks 7-8: Word sums and matrices.** The previous lessons focused on the systematic meaning of various affixes. For example, when students were taught a prefix, the prefix’s meaning was explained and numerous examples were provided to reinforce the idea that the prefix plays a systematic role in these words. For the last two weeks, roots, both free and bound, were the primary focus as opposed to the affixes. Free roots are able to stand on their own without other morphemes attached to them (e.g., *care*, *friend*, *love*), while bound roots cannot stand on their own—they must be attached to other morphemes (e.g., *struct*, which is the root of words like *construct*, *instruct*, etc.) which can be difficult to recognize.

This section’s goal was to demonstrate that root word meaning remained consistent across word variations and was modified by affixes. Word matrices and word sums were used to help demonstrate how morphemes work together to form a variety of words related to each other in meaning (Bowers & Kirby, 2009). It helps the learner to understand morphological families, which consist of all of the morphologically complex words that can be created from one root word (Bowers & Kirby, 2009). For example, the students were given the root word *care*, provided with many prefixes and suffixes, and shown how to create many words by piecing units together—*childcare*, *careless*, *careful*, *cares*, *cared*, *caring*, *carefree*, etc. This section gave students a chance to build words instead of focusing on disassembling the morphologically complex words as in the previous sections.

### Concluding Remarks

In a small pilot study in our lab, we found this intervention to be successful in promoting phonological and morphological awareness, spelling, and vocabulary skills. A general trend of increasing abilities in phonological awareness,

spelling, and vocabulary was demonstrated from pre-test to post-test for those who participated in this intervention. Although these increases were evident, the intervention group was generally outperformed by the control group. However, this could be due to the attrition rate; often, low level students are often the first to drop out due to discouragement and a lack of confidence (Schwertman & Corey, 1989). Participation in the intervention may have given lower level students a reason to continue.

Gains in phonological awareness may be due to the reciprocal relationship that phonological awareness has with morphological awareness (Carlisle, 2012), and suggests that the morphological intervention had a positive effect on phonological awareness. Similarly, increases in spelling and vocabulary abilities suggest that the intervention group may have had a more efficient assimilation of the morphological skills than the control group who had no increases in spelling ability and limited gains in vocabulary. The intervention group demonstrated more gains in skills than the control group, hinting at the potential that this type of instruction could have.

This study suggests that instruction in morphological awareness will benefit other skills, particularly higher level skills. It is most beneficial to develop this skill in later elementary school and beyond. However, since

it is moderately correlated with phonological awareness, phonological awareness cannot be neglected either. Phonological awareness and phonics develop before morphological awareness (Anglin, 1993), and research with children demonstrates that phonological awareness has a stronger relationship with these literacy skills for younger children. However, after the 3<sup>rd</sup> or 4<sup>th</sup> grade, MA becomes a more important and reliable predictor (Deacon & Kirby, 2004; Nagy et al., 2006). Therefore, developmentally, a student needs to have a good base in phonological awareness before adding the morphological complexity (Carlisle, 2012; Deacon & Kirby, 2004); thus, this intervention might not be effective for those learners who are still developing very basic literacy skills. Inclusion of basic morphemes in instruction while still gaining a firmer, but not an introductory, grasp on phonemes is important for adult learners, because morphology becomes more essential with mature learners (Nagy et al., 2006; Singson, Mahony, & Mann, 2000) due to its positive relationships (in many cases stronger relationships) with other skills (i.e., spelling, vocabulary, comprehension, etc.). We hope that this intervention will produce meaningful growth in ABE learners' spelling, vocabulary, and comprehension abilities. ❖

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## References

- Anglin, J. M. (1993). Vocabulary development: A morphological analysis. *Monographs of the Society for Research in Child Development*, 58, v-165.
- Arnbak, E., & Elbro, C. (2000). The effects of morphological awareness training on the reading and spelling skills of young dyslexics. *Scandinavian Journal of Educational Research*, 44, 229-251.
- Bowers, P. N., & Kirby, J. R. (2009). Effects of morphological instruction on vocabulary acquisition. *Reading and Writing*, 23, 515-537.
- Bowers, P. N., Kirby, J. R., & Deacon, S. H. (2010). The effects of morphological instruction on literacy skills: A systematic review of the literature. *Review of Educational Research*, 80, 144-179.
- Carlisle, J. (2012, July). *Discussant*. Discussion presented at Society for the scientific study of reading, Montreal, Quebec.
- Deacon, S. H., & Kirby, J. R. (2004). Morphological awareness: Just "more phonological"? The roles of morphological and phonological awareness in reading development. *Applied Psycholinguistics*, 25, 223-238.
- Dietrich, J. A., & Brady, S. A. (2001). Phonological representations of adult poor readers: An investigation of specificity and stability. *Applied Psycholinguistics*, 22, 383-418.
- Herman, J., Gilbert Cote, N., Reilly, L., & Binder, K.S. (2013). Literacy skill differences between adult native English and native Spanish speakers. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 2(3), 142-155.
- Jarmulowicz, L., Hay, S. E., Taran, V. L., & Ethington, C. A. (2008). Fitting derivational morphophonology into a developmental model of reading. *Reading and Writing: An Interdisciplinary Journal*, 21, 275-297.
- Kirk, C., & Gillon, G. T. (2009). Integrated morphological awareness intervention as a tool for improving literacy. *Language, Speech, and Hearing Services in Schools*, 40, 341-351.
- Nagy, W., Berninger, V., & Abbott, R. (2006). Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. *Journal of Educational Psychology*, 98, 134-147.
- Nunes, T., Bryant, P., & Olsson, J. (2003). Learning morphological and phonological spelling rules: An intervention study. *Scientific Studies of Reading*, 7, 289-307.
- Schwertman, K., Corey, M., & New York, P. L. (1989). *Writing processes and behaviors of adult literacy students: An ethnographic case study*. 1-54.
- Singson, M., Mahony, D., & Mann, V. (2000). The relation between reading ability and morphological skills: Evidence from derivational suffixes. *Reading and Writing: An Interdisciplinary Journal*, 12, 219-252.
- Stahl, S. A., & Shiel, T. G. (1992). Teaching meaningful vocabulary: Productive approaches for poor readers. *Reading & Writing Quarterly*, 8(2), 223-241.
- Tighe, E.L. & Binder, K.S. (2015). An investigation of morphological awareness and processing in adults with low literacy. *Applied Psycholinguistics*, 1-29.
- Tighe, E. L. & Schatschneider, C. (2014). Examining the relationships of component reading skills to reading comprehension in struggling adult readers: A meta-analysis. *Journal of Learning Disabilities*, 43(2), 108-121. doi: 10.1177/0022219414555415
- To, N. L., Tighe, E. L., & Binder, K. S. (2014). Investigating morphological awareness and the processing of transparent and opaque words in adults with low literacy skills and in skilled readers, *Journal of Research in Reading*. doi: 10.1111/1467-9817.12036
- Tong, X., Deacon, S. H., Kirby, J. R., Cain, K., & Parrila, R. (2011). Morphological awareness: A key to understanding poor reading comprehension in English. *Journal of Educational Psychology*, 103(3), 523-534.
- White, T. G., Sowell, J., & Yanagihara, A. (1989). Teaching elementary students to use word-part clues. *The Reading Teacher*, 42, 302-309.
- Wu, X., Anderson, R. C., Li, W., Wu, X., Li, H., Zhang, J., Zheng, Q., Zhu, J., Shu, H., Jiang, W., Chen, X., Wang, Q., Yin, L., He, Y., Packard, J., & Gaffney, J. S. (2009). Morphological awareness and Chinese children's literacy development: An intervention study. *Scientific Studies of Reading*, 13, 26-52.

**Table 1 – Lesson Descriptions and Examples**

Week	Purpose	Specific Content	Examples	Activities
1	Introduction	Define the following terms: <ul style="list-style-type: none"> <li>- Root</li> <li>- Suffixes</li> <li>- Prefixes</li> <li>- Compounds</li> <li>- Contractions</li> </ul>	<ul style="list-style-type: none"> <li>- Compound words: <i>sunshine, moonlight, without, homemade</i></li> <li>- Prefixed words: <i>disgrace, unlock, bicycle, reread</i></li> <li>- Suffixes words: <i>clocks, kindly, drained, prancing</i></li> </ul>	<ul style="list-style-type: none"> <li>- Underline the root word in the morphologically complex word</li> <li>- Game - learners are given cards and they use the words on the cards to create compound words</li> <li>- Underline the affixes in the complex words</li> </ul>
2-4	Suffixes	Learn the meaning and use of the following suffix categories: <ol style="list-style-type: none"> <li>1. Plural</li> <li>2. Verb Endings</li> <li>3. Someone Who</li> <li>4. State of Being (state, process, or condition of something)</li> <li>5. Characterized By</li> <li>6. Adjectives</li> <li>7. Quality/Related To</li> <li>8. Able to/Become</li> </ol>	<ol style="list-style-type: none"> <li>1. s, es, ies</li> <li>2. ed, ing</li> <li>3. or, er, ian, ist</li> <li>4. ion, sion, tion, ment, ness</li> <li>5. ly, ous, ious, eous</li> <li>6. less, er, est, ful</li> <li>7. ity, ty, ic, ive, al, ial</li> <li>8. able, ible, en</li> </ol>	<ul style="list-style-type: none"> <li>- Categorize words from a word bank</li> <li>- Identify the root word and other forms of words based on the suffix</li> <li>- Underline root words and match it to its definition</li> <li>- Match morphologically complex words to their root word</li> </ul>
5-6	Prefixes	Learn the meaning and use of the following prefix categories: <ol style="list-style-type: none"> <li>1. Numbers, Quantity, &amp; Size</li> <li>2. Not &amp; Opposite</li> <li>3. Location</li> <li>4. Time</li> <li>5. Cause</li> </ol>	<ol style="list-style-type: none"> <li>1. equ/equi, mega, micro, multi, over, poly, semi/sem, under</li> <li>2. ir, in, im, il, un, non, anti, de, dis, mis</li> <li>3. sub, super, mid, intra, trans, inter</li> <li>4. fore, pre, post, re, pro</li> <li>5. em, en</li> </ol>	<ul style="list-style-type: none"> <li>- Draw pictures or diagrams to match a prefix's meaning</li> <li>- Word search that provide morphologically complex words in its word bank while the learner searches for the root word</li> <li>- Use a story as context for learning prefix meaning</li> <li>- Underline root words and match it to its definition</li> </ul>

**Table 1**—Lesson Descriptions and Examples (continued)

Week	Purpose	Specific Content	Examples	Activities
7-8	Word Sums & Matrices	Learn how to use Word Sums and Matrices: <ul style="list-style-type: none"> <li>- Introduction of Word Matrices</li> <li>- Explanation of Free and Bound Root Words</li> <li>- Matrix Example</li> <li>- Matrix Practice</li> <li>- Matrix to Sum</li> <li>- Sum Practice</li> <li>- Exploration &amp; Wrap Up</li> </ul>	<ul style="list-style-type: none"> <li>- Free root words: <i>care, friend, love</i></li> <li>- Bound root words: <i>struct</i>, which is the root of words like <i>construct, instruct</i>, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Look for all prefixes and define each of them</li> <li>- Look for all suffixes and define each of them</li> <li>- Identify the root and define it</li> <li>- Determine the definition of the word based on the definitions of the root and affixes</li> <li>- List 3 to 6 other words that are in the same word family</li> <li>- Write appropriate word sums</li> </ul>

## The Politics of Adult Education

**Art Ellison**

New Hampshire Department of Education

One of the realities of working in a field for many, many years is that you accumulate a huge amount of information – some of it useful, some not so much so. In this article I will try to extract some wisdom from my experience over the years as an organizer/advocate for adult education.

One of the huge changes in the field with regard to advocating for adult education programs and our students over the last 15 years is that we have managed to demystify the advocacy process. For many years, adult educators had very little idea of how to go about this work. Thankfully we have learned a great deal and simplified the process to the point that the definition of advocacy is pretty clear and concise: to influence public policy you need to get the right information to the right people at the right time with multiple messengers.

Any discussion of advocacy in the adult education field inevitably encounters the question of lobbying. The vast majority of actions taken in an advocacy campaign do not fall under the Internal Revenue definition of lobbying. For those few actions that do meet the IRS definition of lobbying, it is important to note that 501(c)(3) organizations, the backbone of the adult education programs offered by community-based organizations, can utilize up to 10% of their funding for lobbying activities. In almost all cases, an adult education organization engaged in advocacy

will never come close to reaching the 10% limit on any of their activities that would be defined as lobbying (Jeff Carter, personal communication, December 9, 2015).

Lobbying is describe by the IRS as either direct lobbying (communicating a position on specific legislation to a legislator or government employee involved in the formulation of the legislation) or grassroots lobbying, such as urging your community or the general public to contact legislators with a position on a specific piece of legislation. A “call to action” to your members, if you have members, is a good example of grassroots lobbying. Both of these lobbying actions are permissible by 501(c)(3) organizations with up to 10% of their total budgets.

However, not all advocacy involves lobbying. For example, technical assistance or advice to a governmental body or committee in response to an unsolicited written request is advocacy. Additionally, a nonpartisan analysis, study, or piece of research that may advocate a particular view is not considered lobbying provided that (1) the presentation of the relevant facts is sufficient to enable readers to reach an independent conclusion, and (2) the distribution of the results is not limited to or directed toward persons solely interested in one side of a particular issue.

The best example of advocacy on the national

level came in 2005 when then President Bush proposed cutting federal adult education funding by 66% (\$366 million ) for the 2006 fiscal year. His budget proposal, which included this cut, went to Congress in late January. During the next six months the national adult education community flooded Congress with 425,000 letters asking them to reject his proposal. This effort was successful; at the end of the budget cycle, the money stayed in the budget. Senate and House staff indicated that during the six month time period when the budget proposals were under consideration by Congress, adult education along with the concerns of senior citizens received the most mail.

We learned from that advocacy campaign that while data and well written studies/reports about our work are important, the number of contacts with policy makers, particularly from students, is much more important. Another lesson from this campaign was that the field of adult education needs to create advocacy networks that rival those of AARP, NRA, and the National Chamber of Commerce.

Over the years many of our advocacy efforts for adult education have focused on what I would call the “truth and justice” approach to the process. We are convinced that if we can just get the right information to the important people then they will reward us with lots of funding. Unfortunately, there are thousands of other groups that use the same approach. While good, reliable information is essential to an advocacy campaign, good information with 500 or more contacts from constituents is much better.

Other key elements from successful campaigns include:

- **Alignment:** Policy makers will only take note of communication from constituents from their legislative districts. This requires an understanding of where students live,

identifying their representatives and figuring out the best method to connect the two groups. The best way to make the connection to align legislative district maps with the maps of the residences of adult education program students.

- **Threshold number:** Early in the advocacy process, campaigns need to determine a threshold number of supporters for members of the House and Senate. This is the number of contacts that a member needs for their office to determine that an issue is important to the constituency. The easiest way to determine the number for any advocacy campaign is for adult educators to ask their state House members and Senators. As the late Sam Halperin (2001) wrote “Members receiving 25-50 communications over a period of time have been known to exclaim: ‘They’re on my back on this one! I’ve got to move.’” (p. 48). In most states the threshold number for each member of the House is somewhere between 15-30.
- **Targeting:** The concept of targeting is essential. Key members of legislative bodies need to be identified for attention from the field. While contacts with all members of policy making bodies are important some are more important than others (Appropriations/Finance/Education Committee members).
- **Focus on the Governor:** It is much easier to get an increase in adult education funding through a legislature when the Governor proposes the increase in the budget than it is to convince legislators to add the funding during the appropriations process. However, if additional funding is not in the Governor’s

budget proposal then the advocacy campaign should focus on the legislature.

- **Allies:** Identify allies in each local community. In every community there are representatives of hospitals, banks, social service organizations, utilities, churches, higher education institutions, etc. who will be willing to contact policy makers on behalf of a request for additional adult education funding or support for a specific piece of legislation.
- **Champions:** Identify champions in the legislature. Use them to carry the message to other key legislators. Identifying champions is done by asking advocates in the adult education field to name the legislators who have been the most helpful in the past on appropriations/legislation issues.
- **Constant advocacy:** Adult education advocacy should be a year-round activity. Adult educators must have a steady flow of communication with policy makers so that we are not only contacting those folks when we want money. Yearly program reports, invitations to visit programs, and visits to legislators in their offices should all be part of a planned effort to maintain contact with policy makers.

Finally, students must be involved. A continuing major obstacle for advocacy campaigns for adult education is summed up by the chair of a state legislative Ways & Means Committee, “no one believes that adult education has a constituency that we need to pay attention to.” Coupled with the wise words of albeit fictional President Jed Bartlett (West Wing), “Those who show up make the decisions,” we are left with the principle message for future adult education advocacy campaigns: involve massive numbers of students in our campaigns or we will not

be successful in growing or maintaining our field. In the most successful campaigns, approximately 80% of the contacts have come from students and 20% from staff and friends of adult education.

Student letters are highly effective. The most effective student letters contain the following elements: they tell the policy maker why the students enrolled in the adult education program, what they would like to do when they graduate, and an ask (this can be a request for more funding for adult education programs or more generally thanking the member for his/her support). In a recent campaign in a small state, over 2,000 student letters were sent to the Governor’s office before the budget went to the legislature, and 5,000 went to members of the legislature when they were considering the budget. The result was an increase of 7.5% in state funding. However, similar campaigns in the past have resulted in as much as a 100% increases in multiple states.

The increased involvement of students in successful advocacy efforts has recently raised the issue of whether or not political literacy should be added to the goals for adult education programs. Adult educators have been comfortable in expanding the list of goals for their work, most recently adding health and economic literacy to the list of mathematics, reading and writing literacies, however the concept of political literacy, which is more specific than just civic engagement, takes many adult educators into an area with which they have very little background or interest. If we are serious about helping students understand the institutions with which they interact, then political literacy should become a part of every adult education program in the country. By helping students to understand and participate in the political process of their country, state, county, town, or city and thus develop their political/civic literacy, we will be preparing them with tools that they can use

throughout their lives to advocate for themselves, their families and communities. At the same time, we know that student involvement in advocacy is an important element in successful campaigns to maintain or increase funding.

Advocacy campaigns for adult education funding/legislation will continue to arise from time to time in the states and to a much lesser degree on the national level. However, the field of adult education will never become a true national movement until we understand that hundreds of thousands of students must be the driving force in that effort. In order for that to happen, advocacy must become an integral part of adult education at all levels with an intensity that is best expressed by the famous labor organizer Mary Mother Jones: “Pray for the dead and fight like hell for the living.” ❖

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**Art Ellison** is longtime advocate for adult education having managed numerous advocacy campaigns over the past forty years on the state and national levels. Prior to his employment in 1980 as the NH State Director of Adult Education he worked for many years as a high school teacher and as a community organizer.

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## References

Halperin, S. (2001). A guide for the powerless and those who don't know their own power: A primer on the American political process. Washington, DC: American Youth Policy Forum.

### New and Effective Approaches to Adult Basic Skills Advocacy

David J. Rosen  
Newsome Associates

U.S. public adult basic skills education, as adult education researcher Thomas Sticht has often pointed out, is on the margins of public education. By many measures, in the past decade it has experienced significant further decline. In the last decade and a half, according to Sticht's (2015) analysis, "enrollments in the Adult Education and Literacy System (AELS) have dropped from some 4.3 million in 1999 to under 1.6 million in program year 2013-14, the last year with data available." Federal funding for adult basic skills education, which includes English language learning, has at best stagnated; in constant dollars, it has declined. In constant 2015 dollars, according to Sticht (2015), "the federal funding purchasing power was \$577 million in 2000, some \$79 million more than a decade and a half later in 2015." Because of increased costs needed to meet rising content standards and greater accountability requirements as well as other increasing program expenses, effectively this has meant fewer federal resources. State public funding, with a few modest exceptions, at best is also level; in many states, such as California, adult basic skills funding has been severely cut (Sticht, 2015). As a result of increased demand, higher costs, and fewer resources, according to the National Council of

State Directors of Adult Education (NCSDAE), there are waiting lists now for adult basic skills services in virtually every state.<sup>1</sup>

What can we do to change that? What is the role of public policy advocacy at state and national levels? What are the most effective public policy advocacy strategies? Do we need to make adjustments to our approach to public policy advocacy, or do we need to overhaul it?

Adult basic education public policy advocates need to continue and expand their local, legislator-by-legislator community, state, and national organizing efforts. This is essential, the *sine qua non*, of adult literacy advocacy. However, times have changed, and we also have to do some things differently:

- **We need a new major media campaign.** It has been almost three decades since the last major media campaign for adult literacy, Project Literacy U.S. (PLUS), that was sponsored by major television and radio broadcasters with the help of the Ad Council. During and right after this campaign, our field gained ground, not entirely due to the campaign, but it helped. Many more Americans knew we had an adult literacy challenge in our country, and we had adult literacy champions

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<sup>1</sup>Waiting list information available from NCSDAE website, <http://www.ncsdae.org/2010%20Adult%20Education%20Waiting%20List%20Report.pdf>

in Congress. Since then, however, we have lost ground in both public awareness and legislators' interest and commitment to address the issue. In a new media campaign we now need both traditional media—radio, television and newspapers—but we also need Internet social media.

- **We need strong public policy advocacy for basic skills from our adult literacy stakeholding partners.** We need to emphasize organizing at community and state levels of our adult basic skills partner stakeholders such as: community colleges; employers; labor unions; poverty and income inequality reduction advocacy groups; community health centers and other health promotion and health care organizations; immigration rights advocacy organizations; advocates for reduction of prison and jail recidivism and for successful transition of former inmates into the community; advocates for affordable housing for low-income and homeless people; campaigns to raise the minimum wage; libraries, newspapers and book publishers; public schools' intergenerational efforts to improve children's reading readiness for school by helping their parents to learn to read, and others who depend for the success of their initiatives and efforts on their clients having good basic skills.

However, we need to change the nature of these community and state advocacy partnerships; adult literacy practitioners are too used to being supplicants with not only policymakers but also with their community and state partners. We need to be equal partners in our coalitions in which all partners benefit directly *as organizations* from what their adult basic skills partners offer, in addition to having their clients benefit from increased basic skills. For example, in

Cleveland Ohio the Literacy Cooperative, a coalition of literacy organizations including those providing adult literacy services, has launched a very successful social media campaign through which they offer opportunities to their partner organizations to also get attention for their organization's issues .

- **We need to make clear that adult basic skills programs are effective** to share effectiveness with our basic skills stakeholder partners, as well as with the general public and policymakers.
- **We need to make clear why adult literacy and basic skills are essential to our partner organizations' success**, for example in reducing prison recidivism or family poverty, or in parents' preparing children for school.
- **We need new blood in basic skills advocacy work.** The strongest advocates in our field, social change advocates and labor and community organizers from the 1960s, have been retiring, and although there may now be a new generation of social change advocates, they are not yet showing up in our field, and especially not in adult basic skills advocacy work. We need to reach out to them, perhaps through our work with partner social change organizations, and recruit them to be part of our advocacy efforts.

I want to emphasize how important it is to continue to educate public policy makers about the importance of increasing public support for adult basic skills. Legislators have the power to strengthen adult literacy. I want to conclude by describing or reminding readers of some of the most important strategies to reach legislators:

- **The most important overall strategy is to create and maintain a statewide adult literacy/basic skills advocacy organizing committee.** This committee works year round to organize program practitioners and

students. In the fall each year, it determines what to ask legislators to do. This may change from year to year depending on the needs, the resources available, and on political ctors. This group then mobilizes the field to contact legislators and support the agreed-upon advocacy goal for the year. In turn, field advocates at the programs communicate back to the organizing committee what the legislators' responses are so that the advocacy campaign can be adjusted as needed.

- **Program activities.** These include: meet and greet events with legislators invited to the program to meet and talk with the students; inviting legislators to be speakers at graduations, where they're also often presented with awards from the program for their support for adult literacy/basic skills, and sending postcards to legislators about student successes and the length of program waiting lists.
- **Students' Visits to State and Congressional Legislators.** Legislators want to speak with constituents. It is important for students to visit their state and national legislators in their offices and to talk about what attending an adult literacy program has meant for them, to tell their story. Students understand and can convey how important these services are. Legislators also appreciate data, particularly if it's focused on their state legislative or Congressional district or, in the case of U.S. Senators, on the whole state. They want to know what percentage or number of their constituents are enrolled in adult basic skills programs, how many adults are on waiting lists, and how long a wait there is for the

services. They may also want to know what the outcomes are for adult learners: how many get a high school equivalency diploma, how many improve their English language skills and to what levels, how many get jobs, how many advance in their jobs or are on career paths leading to family-sustaining salaries, how many learn how to read so that they can read to their children, help their children with homework or read the labels on medicine bottles.

These national public policy advocacy resources may be helpful to all adult basic skills advocates, and especially to new advocates. Also, many states have adult basic skills public policy advocacy organizations.

**Commission on Adult Basic Education (COABE) website Legislative Center and Media Toolkit**  
<http://www.coabe.org/legislative-center/>

**National Coalition for Literacy Research and Factsheets**  
<http://national-coalition-literacy.org/research/>

**ProLiteracy Advocacy webpage**  
<http://proliteracy.org/get-involved/advocate>

**TESOL Advocacy Resources**  
<http://www.tesol.org/advance-the-field/advocacy-resources>

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**David J. Rosen** is an education consultant in the area of adult education and technology, including blended learning.

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## References

Sticht, T. (2015, August 17). Message posted to <http://lists.literacytent.org/pipermail/aaace-nla/2015/008254.html>

### Student Leaders as Advocates

Regina Suitt

Pima Community College

The need for adult education programs and services is great, yet federal and state funding and enrollment have declined in the last 10 years – from nearly 2.8 million learners and over \$700 million in federal funding in 2001 – to 1.8 million learners and \$595 million in federal funding in 2012. Several states have also cut, or tried to entirely eliminate, adult education funding. “Although federal adult education has traditionally been supplemented by sizeable state-level matching funds, a decline in federal and state funding for adult education has resulted in states serving only a fraction of the students...who could benefit from services” (Foster, 2012, p. 1).

This reality means that the field is burdened to protect what federal dollars still exist; those of us in the adult education field - in the trenches - see the scope and urgency of advocacy work necessary to survive. But who should do this advocacy work? Who makes sure that the public and policymakers know and understand “what” adult education is and “who” needs adult education services? And, when and how often does advocacy have to occur to be effective? These are critical questions for a field already taxed with teaching or re-teaching everything that students need to succeed in the 21<sup>st</sup> century including technology competencies, college and career readiness standards, work-based skills, and civic engagement.

One approach to address these funding challenges is to engage our students in making the case to funders and policy makers for addressing their needs. We have been doing this for over 40 years at Pima Community College Adult Basic Education in Tucson, Arizona. We do this by laying the foundation for an active network of adult education student advocates, or Ambassadors, who can effectively connect with key community leaders and organizations. Student leadership development and civic engagement are an integral part of our programming, values, and philosophy. Because of the value placed on student leadership, we look for opportunities to connect students to the community and to connect the community to adult education. We do that with legislative visits, open houses, student leadership training, digital story training, involvement in community organizations that share similar values, election coverage, voter registration, state and national conferences, and field trips.

Every year, *in good times or bad*, our program and our students engage in civic activities that connect them to local, state and national policy makers. Programs can't suddenly come out of hibernation and switch in to advocacy mode when there is a crisis; they need to make this an ongoing and systematic part of their work. This includes building and maintaining relationships with allies. For example, Richard Elias of the Pima County

Board of Supervisors notes his understanding of adult education when he says “I always have been an avid supporter of adult basic education, which is a necessary first step for so many people to move out of poverty and into a productive and rewarding life” (personal communication, December 1, 2015).

Additionally, advocacy work develops the skills and capacities of our students to be Ambassadors. The work has to be deliberate, strategic and intentional. *We don't just send students on field trips, and we don't just parade them in the front of events.* We truly value our students and the skills and experience they bring to us. We train student leaders to be Ambassadors with clear expectations about what their role is and what their leadership means to the field. As Ambassadors, they practice what they learn by actively engaging in Adult Basic Education advocacy to raise awareness of what it is and why it is important to families, to the K-12 system, and to the economy. For example,

- When we visit the Arizona capitol, the purpose is to raise awareness about adult education, nurture power and voice, learn about the government, and connect students to their legislators.
- When we visit with a City Councilwoman, the purpose is to ensure access to appropriate bus routes for students.
- When we testify at a local Board of Supervisor meeting, the purpose is to thank them for their support.
- And when we give a Congressman a tour of our centers, the purpose is to show how important classes and programs are for so many.

Importantly, these activities have increased support for our program, but we also witness the ways in which it transforms adult students who, for the first time perhaps, see their personal stories as an asset rather than a deficit. They see the power of

their stories in other people's faces. And they see the influence they can have on their own lives and on the lives of others. To see others gain that sense of power through their own voice is an impactful experience for all of us.

We offer our Ambassador training locally, statewide and nationally. The Ambassador training program is an intensive leadership initiative that supports student leaders in developing their skills to represent adult basic education and literacy in the larger community. Although, we have advocated side-by-side with students for 40+ years, we formally began offering Ambassador training in 2009. Since then, 200+ students have prepared themselves to be Adult Education Ambassadors in Arizona by participating in advanced representational leadership training and by leading meetings with public officials and community leaders. “Ambassadors develop skills to do the following: share their stories; educate the community about the importance of adult education; develop relationships with elected officials and community leaders; serve in leadership and decision-making roles both within and outside of the school; serve as members of an active student and alumni network. The four components of the training are: 1.) awareness about the role of adult education 2.) stories for change 3.) public speaking focused on message and delivery and 4.) planning and facilitating a meeting with an official. Adult Education Ambassadors have represented their fellow students and their communities in countless meetings with officials, providing outreach and information at public events and resource fairs, and by presenting at local, state, and national conferences.

Student Ambassadors have had many wins along with challenges over the years. In Tucson, two free standing adult education learning centers were built through the hard work and effort of student leaders, along with grassroots community organizing and

passionate policymakers. They told their stories at City Council meetings, at County Board of Supervisor meetings, at marches, at community meetings, in neighborhood homes and in their classrooms. Those two buildings built by and for students stand 15 years later as a testament to the power of student story and student advocacy.

In Arizona, student Ambassadors worked to address a crisis at the state level. In 2003, adult education was completely eliminated from the state budget. Student Ambassadors from around the state, along with community supporters, worked for months to ensure funding was put back into the budget. Thanks to committed legislators and the Governor, adult education funding was fully restored! (For more information about this effort, see <https://vimeo.com/9186597>).

Again during the recession in 2009, adult education funding was removed from the 2010 budget. After three and half years of students' tireless work, adult education Ambassadors, legislators, and community friends, state funding was fully restored in 2013. Indeed Arizona State Senator Steve Farley credited this effort with saving adult education.

Legislators are overwhelmed with emails, letters, and calls from constituents and non-constituents alike, so it is easy for a policy message to get lost in the shuffle. Nothing penetrates the legislative fog like a personal story related face to face by a constituent. In Arizona the hard, consistent work of the adult literacy community over many years played a key part in restoring program funds in a political climate not normally friendly to social services (personal communication, November 3, 2015).

Besides restoring funding, engaging students in advocacy for adult basic education has additional benefits. Students learn transferrable leadership skills that they can utilize in their future careers and in life in general. Many times, after completing adult basic education, student advocates continue their education to become teachers, activists, and some even work either within the adult basic education or other service organizations where they received help. Another benefit is the long term relationships many students build with policy makers. Legislators benefit too. They see firsthand how their decisions affect real people, families and communities. This civic engagement learning is appreciated at the national level. Congressman Raúl Grijalva, a member of the House Education and Workforce Committee, voiced this view when he said:

Civic engagement is critical in helping new immigrants and disenfranchised students learn how to advocate for themselves and others. There is no better way to learn about government than to meet policy makers and learn about the political process first hand. Students who understand their power in our society inspire and empower others to do the same, which is truly profound to see (personal communication, November 20, 2015).

Advocacy doesn't always involve politics or politicians. If students meet with a prominent Faith Leader or Business owner or Community Board, two things happen: The community learns about adult education AND these leaders become our allies when or if we need them.

The dismantling of adult education opportunities for the hundreds of thousands of working people throughout the nation disregards the needs of not

just the most vulnerable among us, but the future welfare of our nation as a whole. The development of opportunity outside the “pipeline” thinking is precisely what we need to consider when planning our advocacy activities. And including students in the struggles and triumphs of advocacy work is critical to our survival as a field as well as the survival of the programs and classes they so greatly need.

Student voice is at the heart of our work in adult education. Students come to us to acquire the language and basic skills they need to thrive in their daily lives. In a larger sense, students developing their voice means gaining the skills to fully participate in community and civic life, influencing public decisions that will affect them and their families. Their ability to speak and advocate for themselves—in the workplace, in their children’s schools, in their communities—is critical to their success and well-being. The Ambassador training provides adult learners a recognized role in which they can publically speak about their own experience and represent the common interests and needs of adult education students. Moreover, students develop skills and confidence in their leadership that transfer to other personal and professional roles.

There are countless advocacy approaches that work well. In a perfect scenario, students would have a team of politically savvy leaders, community supporters, legislators, and, in some instances, a lobbyist working with them to strategize and plan. There would be marketing materials, glossy brochures and flyers. It’s essential to employ a variety of strategies for different situations. We have found in Arizona and in Pima County, that students are their own best advocates. Maria Eugenia Carrasco, an Adult Education Ambassador summed this up when she said, “We all have the right to stand up and talk about what we don’t like and try to change it—that’s Democracy to me” (Goldberg, Magisos, & Nowicki, 2004). ❖

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**Regina Suitt** is the Dean for Adult Basic Education for College & Career at Pima Community College. She leads ABE, ASE, and ELAA programs, as well as others for nearly 6,000 students a year in the 2nd largest program in the state.

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## References

- Foster, M. (2012). *Adult education funding levels and enrollment: State and federal funding woes spell trouble for low-skilled students seeking further education*. Washington, DC: Center for Law and Social Policy. Retrieved from <http://www.clasp.org/admin/site/publications/files/adult-ed-funding-enrollment-February-2012.pdf>
- Goldberg, E., Magisos A., & Nowicki, J. (Producers), (2004). *We are adult education: Making our voices heard*. Pima College Adult Education, PCAE Civics Program. Retrieved from <https://vimeo.com/9186597>

### Placing Advocacy at the Heart of Adult Education

**Jackie Taylor**

Public Policy Consultant

**A**dult educators know that adults and families change their lives through adult education. It is, for some of us, what fuels our passion for teaching and keeps us in the profession. Adult education also positively impacts a host of social and economic issues. Yet this fact is largely unknown or misunderstood by the general public. Resources have become increasingly scarce, while at the same time adult educators are asked to do more with less.

Then comes the question: will we call or write our legislators because of issues taking place (far away) on Capitol Hill? A quick sense of urgency grips us. Why me? Who has time? Won't somebody else get the right information into the right hands? Shouldn't the information speak for itself? But we (proudly) reach for our cell phones anyway. We know the difference it could make for our students, and we can't afford to do any less.

If we care about helping adults, families, and communities, about changing lives through adult education, then we must place advocacy at the heart of it.

#### **Advocacy—A Good Word Gone Bad?**

At times it is unclear what, exactly, we mean by advocacy, and it's no wonder. There are so many different types of activities used to achieve public

policy outcomes aimed at improving adult education services. Some outcomes may not be directly related to public policy, like creating new partnerships and alliances, messaging and alignment, or strengthening organizational capacity. Other outcomes, like changes in awareness, attitudes and beliefs about adult education, strengthening public and political will, are (Reisman, Gienapp, & Stachowiak, 2007). Yet these all fall under the broad definition of advocacy, which “includes identifying, embracing, and promoting a cause. It is any attempt to shape public opinion, and promote the interests of your community” (Avner, 2002).

Advocacy includes activities like making partnerships and collaborations, engaging the media, educating the general public, inviting community leaders to speak at graduations, or hosting events to raise awareness of adult education. Some may interpret advocacy to be confrontational, rude, or alienating. In reality, effective advocacy is not this way.

#### **Four Tenets of Advocacy**

I have found the following four tenets to be key when working with grassroots advocates from local, state, and national organizations.

## **Tenet 1: Educating Versus Lobbying**

Lobbying is always advocacy, but advocacy is not always lobbying. Whether you are advocating or lobbying, it is important to educate policy makers on the issues. If you are informing legislators of your program successes, along with the need and demand for services, then you are educating. If you are combining that information with a request for action on specific legislation (the issues plus “the ask”), then you are lobbying.

## **Tenet 2: With or Without Your Information**

Legislative assistants (staffers) want to know what you think about adult education. They expect you to have a point of view. They are paid to talk to you. They gather information for their boss (your legislator) and make recommendations.

Legislators make decisions based upon the information they have from you. If they have no information, you cannot expect them to support you. If they don't hear from you each year, they will assume it is not important and they can trade your issue (adult education funding, for example) off for something else. Wouldn't you rather have legislators making decisions with your information than without it?

## **Tenet 3: Numbers Count!**

As Art Ellison noted, legislators count the numbers of constituent responses per issue, so numbers do matter. Your response to an issue could push adult education over the threshold for your legislator's office so that it is flagged as important and passed on.

## **Tenet 4: What You Can Do**

As a citizen, you have the right to express your views with your legislator—your representative. As an

adult educator, you have unique, valuable expertise about the issues. Without this information, your representatives may make decisions that are not as well informed. If your program receives federal or state funding, it doesn't mean that you cannot state your opinion as an individual. But as an individual, you should not do these activities from work or on work time, or using work equipment or supplies.

The relationship between the work to create advocacy outcomes—and the actual signs of—progress can be elusive, because “advocacy by its nature is complicated and its impact often indirect” (Teles & Schmidtt, 2011). So what impact do we want to have? What outcomes do stakeholders want to see advocates achieve? Where are we doing well, and where do we fall short? What do we need to do in order to improve public policy advocacy for adult education that makes a positive impact?

## **Shifting the Paradigm**

What stands out to me as I consider what's needed for advocacy is the broad range of commitment to it in our field. Some local areas are tenacious advocates and have the support of their legislators. Other program areas participate to varying degrees and some do not participate at all. So those who do call, visit, and write their legislators carry the water for the rest. That is not a sustainable system because it is vulnerable to attrition as long time valued organizers and advocates retire or move. And in districts where more advocates are needed few may exist. As author David Rosen points out, “We need new blood in basic skills advocacy work.”

Our field also tends to be reactive more so than proactive. Some organizations are successful at being proactive—the National Council of State Directors of Adult Education, the National Council for Adult Learning, and CLASP are examples. However, we need to shift system wide to being more proactive

with our advocacy—across all adult education programs and organizations no matter their size.

“Programs can’t come out of hibernation when there is a crisis,” Regina Suitt wrote. “Building relationships with allies is a constant duty and is year round.”

“The field of adult education needs to create advocacy networks that rival those of AARP, NRA and the National Chamber of Commerce,” Art Ellison observed.

Further, we lack a current, national, advocacy agenda to which we can all agree on goals for advocacy—and hold a long term commitment to seeing them through. Let’s look at some themes that Ellison, Rosen, and Suitt raised.

### **Student Involvement—The Key to Effective Advocacy**

Involving students in advocacy is the key to make advocacy a central, major part of what we do as adult educators. Advocacy should not rest solely on the shoulders of a profession. According to Ellison, “80% of the contacts come from students and 20% from staff and friends of adult education.” We know from experience that policy makers want to hear directly from constituents—especially those who benefit from services. Ellison warns that “the field of adult education will never become a true national movement until we understand that hundreds of thousands of students must be the driving force in that effort.”

*But how do we involve hundreds of thousands of students?*

One program doing its part is Pima Community College’s Student Ambassador Program. Pima provides the foundation for “an active network of adult education advocates, or Ambassadors, who can effectively connect with key community leaders and organizations,” as Suitt describes.

Of the many ways to involve students, one of the most effective is to have students meet in-person with policy makers. According to a 2011 Congressional Management Foundation (CMF) survey of congressional staff, 97% said “in-person visits from constituents” are the most influential way to communicate with a legislator who is undecided on an issue. (Goldschmidt, 2011).

In fact, in-state advocacy opportunities increased in 2011 when the House of Representatives more than doubled the number of congressional recesses each year (Boniface, 2015). This has made federal legislators much more accessible to advocates for program visits and meetings. For more information about how to arrange and conduct meetings with legislators and about Pima’s Student Ambassador Program, see COABE’s Legislative Center at <http://www.coabe.org/how-to-arrange-a-visit>.

### **Building an Infrastructure for Advocacy and Student Involvement**

At the core of successful advocacy networks is a strong infrastructure for organizing. Our profession can take several steps to place advocacy at the heart of adult education by strengthening its organizational capacity and shifting from a reactive to a proactive approach. Here are some suggestions:

- Make advocacy a fundamental component of your organization’s mission and commit time and resources to it.
- In hiring practices, indicate that you require or desire candidates who have a passion for or experience with advocacy. Ask in an interview that they describe the ways in which they can see themselves advocating with or on behalf of adult education students.
- Make student leadership development and civic engagement an integral part of your programming, values and philosophy.

- Integrate lesson plans, aligned with college and career ready standards, in the context of civic engagement. For example, lessons might include learning how to write or ask questions of policy makers, or analyzing graphs and charts that include information on a wide range of social issues and evaluate them.
- Include advocacy training as a fundamental professional development component for program staff.
- Create a welcoming environment for staff and students to be able to discuss advocacy issues, and what they can do within and / or outside of the constraints of their roles for advocacy.
- Volunteer with your state and / or national organization or association to assist with advocacy.

State and national organizations should:

- Assess your constituents' needs about advocacy and provide targeted support.
- Establish or strengthen a public policy advocacy committee that drives the advocacy work of the organization. See one example from the Illinois Adult and Continuing Educators Association: <http://www.iacea.net/index2/index.php/legislative-center>
- Help local programs and advocates develop Local Advocacy Networks.
- Collaborate in advocacy initiatives and celebrate successes large and small.

### **Strengthening the Base of Support**

In shifting from a reactive to a proactive stance in advocacy, we must stay involved at the local, state, and federal levels. Adult education is vulnerable and funding can easily be cut or be eliminated entirely as in the examples Ellison and Suitt described. Establishing a Local Advocacy Network for federal

advocacy is one way to keep the conversations going at the local level and motivating grassroots networks to action. A local advocacy network has a leader and possibly someone who agrees to co-lead, so there are no gaps in communication—especially when there is an active alert that requires responses. They keep the local advocates informed of issues and mobilize them only in times of need.

### **Elections Campaigns**

Elections campaigns are another way to strengthen the base of support. Presidential and gubernatorial campaigns, as well as state and local elections, are opportunities to engage candidates on the issues. Adult education advocates ask questions of candidates and obtain responses in writing as well as in person. Advocates may meet with the education staff on the campaign, then remind elected candidates of their words after elections. Adult educators can also raise the questions in town halls, for tips see: <http://www.congressfoundation.org/news/blog/1114>. Online town halls are also gaining traction and may provide venues for advocates to raise questions of candidates (Lazer, Neblo, Esterling, & Goldschmidt, 2009).

As a way to keep current officials informed of the issues, advocates might send them the questions as well. It's an engaging way to publicly raise awareness, and build a base of support while learning a lot about the candidates. For example, ProLiteracy, with input from National Coalition for Literacy members, has developed a Presidential Candidate Survey for the 2016 elections. These questions can be used by any advocate for local and state elections. See: [www.national-coalition-literacy.org](http://www.national-coalition-literacy.org).

### **Media Campaigns**

David Rosen has called for a media campaign, and he's right. "It has been almost three decades since

the last major media campaign for adult literacy, Project Literacy U.S. (PLUS), that was sponsored by major television and radio broadcasters with the help of the Ad Council.” We haven’t seen a major media campaign targeted at influencing public opinion on adult education issues and the investments it brings across sectors and in society. We need funders to consider this as an important means for making headway in adult education, and to help fund such a campaign.

### **New Media, New Strategies**

Additionally, new media gives us new opportunities to articulate a clear message, voicing adult education impact and needs. A recent example is a fact sheet from Ace of Florida: *Adult Education, the Choice that Makes the Most “Cents.”* See: <http://www.aceofflorida.org/ace-facts/>. COABE has also issued a series of papers and corresponding fact sheets on adult education issues and they are on the website.

In another survey conducted by CME, they found that 94% of the House Chiefs of Staff felt a “1-2 page issue summary” left behind after a meeting is somewhat or very helpful, while only 18% said the same of a “5 page or greater length” document (Congressional Management Foundation, 2014).

### **Communicating with Congress**

According to a 2014 poll conducted by CME, social media is changing the way offices interact with constituents. According to CQ Roll Call, the study shows that “a handful of well-conceived comments on social media may be just as effective as thousands of emails.” Between ten and 30 similar comments on a social media post are enough to get an office’s attention. However, social media does not yet allow staffers to discern which posts are from constituents in their state or region. But as social media use evolves, we may see it become a more

effective form of communication with Congress. See more at: <http://www.congressfoundation.org/projects/communicating-with-congress/social-congress-2015#sthash.u2d3jMdb.dpuf>

### **Organizing Advocates**

Finally, social media may provide an effective means for advocates to organize, share strategies, and ask and answer questions. Facebook private groups make it a useful place to discuss sensitive information and get support from one another and from the host organization. Facebook is already familiar to many, so most advocates do not need to set up an account and learn a new tool to participate. For case study examples, see CQ Roll Call: <http://connectivity.cqrollcall.com/3-organizations-that-use-facebook-private-groups-for-advocacy/>.

### **Conclusion**

We have seen many successes in our advocacy work over the years, thanks to organizers and advocates across the country. But reacting only during times of proposed cuts is not enough. It takes a lot of educating in order for our advocacy to be effective. And who better to educate others on the issues than adult educators and students? We can and do make a difference every day; let’s bring that same level of passion from our teaching to our advocacy and place it at the heart of adult education. We cannot afford to do any less. ❖

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**Jackie Taylor** has been an adult educator, passionate advocate, volunteer, and organizer at the local, state, and national levels for over 20 years.

## References

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- Avner, M. (2002). *The lobbying and advocacy handbook for nonprofit organizations: Shaping public policy at the state and local level*. St. Paul, MN: Amherst H. Wilder Publishing Center.
- Boniface, R. (2015). 10 Strategies to Successfully Brief a Hill Staffer or Lawmaker. Washington, DC: CQ Roll Call. Retrieved from <http://connectivity.cqrollcall.com/10-strategies-successfully-brief-hill-staffer-lawmaker/>
- Congressional Management Foundation. (2014). *Face-to-face with Congress: Before, during, and after meetings with legislators*. Washington, DC: Congressional Management Foundation. Retrieved from: <http://www.congressfoundation.org/projects/communicating-with-congress/face-to-face#sthash.jQgBkeJx.dpuf>
- Goldschmidt, K. (2011). *Communicating with Congress: Perceptions of citizen advocacy on Capitol Hill*. Washington, DC: Congressional Management Foundation. Retrieved from [http://www.congressfoundation.org/storage/documents/CMF\\_Pubs/cwc-perceptions-of-citizen-advocacy.pdf](http://www.congressfoundation.org/storage/documents/CMF_Pubs/cwc-perceptions-of-citizen-advocacy.pdf)
- Lazer, D., Neblo, M., Esterling, K., & Goldschmidt, K. (2009). *Online town hall meetings: Exploring democracy in the 21<sup>st</sup> century*. Washington, DC: Congressional Management Foundation. Retrieved from [http://www.congressfoundation.org/storage/documents/CMF\\_Pubs/online-town-hall-meetings.pdf](http://www.congressfoundation.org/storage/documents/CMF_Pubs/online-town-hall-meetings.pdf)
- Reisman, J., Gienapp, A., & Stachowiak, S. (2007). A guide to measuring advocacy and policy. *The Evaluation Exchange*, 13(1), 22-23. Retrieved from <http://www.hfrp.org/var/hfrp/storage/original/application/6bdf92c3d7e970e7270588109e23b678.pdf>
- Teles, S. & Schmitt, M. (2011). The elusive craft of evaluating advocacy. *Stanford Social Innovation Review*, Summer 2011, 39-43. Retrieved from [http://ssir.org/articles/entry/the\\_elusive\\_craft\\_of\\_evaluating\\_advocacy](http://ssir.org/articles/entry/the_elusive_craft_of_evaluating_advocacy)



4.0–7.0. Program materials included reading passages thought to be of high interest to adults at four different skill levels. Ongoing performance measures were in place so that as part of regular instructional practice students were scored on reading speed and accuracy. Finally, throughout the program, there were tutor training sessions and workshops “supplemented by videos of expert-delivered instructional sessions and practice activities” (Shore et al., 2015, p. 93).

Reading, vocabulary and comprehension were described by the researchers as the three component areas of fluency instruction; therefore, the GRR program provided instruction in each of these areas (50% reading, 40% vocabulary, 10% comprehension). Reading instruction included modeling by the tutor as well as an embedded phonics approach to decoding. Comprehension and vocabulary seemed to have been addressed simultaneously with learners keeping notebooks that included challenging words and questions related to the readings.

### Research Methods

While the authors do not clearly state their research design, they did discuss their participants and methods used to collect data in this study. Participants included 50 volunteers between the ages of 18 and 72. In order to be eligible to take part in the study, participants had to be attending adult literacy classes in urban areas on the east coast of the United States, have word recognition skills at the 7<sup>th</sup> grade level or below as measured by the WRAT-3, be proficient in English, and have no physical, behavioral or emotional challenges that might prevent them from fully participating. There were a total of 14 tutors who participated in the study, but little is mentioned about their backgrounds prior to participation.

Standardized test data as well as participant interview data were collected. It is not clear exactly how long the study lasted, but what the authors do tell us is that each of the 50 participants completed at least 30 hours of instruction, which included thirty 75-minute GRR sessions with approximately two to three sessions per week. Test data were collected regularly, followed by an interview with each participant regarding their study habits and perceptions of learning and reading.

The researchers administered the Woodcock-Johnson III Tests of Achievement, Broad Reading Cluster and Basic Reading Cluster to measure letter-word identification, passage comprehension, and reading fluency as well as the Test of Silent Word Reading Efficiency to measure sight word and phonemic decoding efficiency. The interviews conducted sought to collect basic demographic information from participants as well as information

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regarding their previous educational experiences and their reasons for taking adult literacy classes. The interviews also focused on reading practice and the participants' perceptions of their abilities.

A multivariate analysis of variance (MANOVA) was used to analyze the standardized test data and evaluate the effects of GRR pilot program though no form of analysis was reported for the qualitative data collected through interviews. Findings showed that GRR had a noticeably large effect on fluency skills, which the authors posited, "stands to reason as the program is fluency based" (Shore et al., 2015, p. 95). In addition to fluency, GRR findings pointed to improvements in participants' comprehension and basic reading skills. However, the authors did state that because the participants were also co-enrolled in a separate adult literacy program, it was difficult to discern whether the gains were related to GRR interventions or those of the other program.

### **Practical Concerns**

There are two major practical concerns that stand out to us in Shore et al.'s (2015) research including the type of placement testing used and the cost of implementation of a fluency based program like GRR. Our first concern is placement testing. The authors report that "each student's score on the their Wide Range Achievement Test (WRAT-3) was used as an initial placement indicator" (Shore et al., 2015, p. 89). We were surprised by this because the National Reporting System (NRS) requires that programs receiving federal funding use one of four tests for Adult Basic Education (ABE) placement: (1) Test of Adult Basic Education (TABE Test), (2) Massachusetts Adult Proficiency Tests (MAPT), (3) Wonderlic General Assessment of Instructional Needs (Wonderlic GAIN), or (4) Comprehensive Adult Student Assessment System (CASAS) (Division of Adult Education & Literacy, 2015). It is difficult to imagine how other programs can be expected to appreciate GRR program implementation when a placement test, outside the group of tests accepted by the NRS, was chosen without explanation and the grade equivalencies reported were done so without offering practitioners a better way to frame those equivalencies with tests with which they might be more familiar.

Our second concern relates to cost of implementation of fluency-based programs like GRR. The creators of GRR stated that it was a pilot project; therefore, not suggesting it was ready for broad-scale implementation in ABE classrooms. As a result, this study does not give practitioners or administrators of ABE programs much to take away other than the idea that tutoring focused on fluency has the potential to show gains in "reading fluency and related reading skills for readers whose basic word reading skills were initially at the low-intermediate level" (Shore et al., 2015, p. 98). As a field, this is simply the

beginning of our exploration. If a program wanted to have a greater focus on fluency, GRR is too resource-intensive to implement effectively in a real-world ABE classroom, and it would be irresponsible to attempt implementation of a program that utilized less resources until studies have been done to see if those kinds of programs can be effective.

More specifically, the cost of implementing a program like GRR is not practical. If a GRR program does provide the gains the researchers claim, we still believe it would be too financially burdensome for the majority of adult literacy programs. In order to implement GRR, an ABE program would need access to multiple assessment instruments; program-specific readings; large numbers of tutors for one-on-one instruction and diagnosis (14 tutors for 50 students, 1:3.5 teacher-student ratio); extensive training (22 hours) which included video, audio, and mock tutorial sessions; and 30 lessons that each last for 75 minutes. And, there are still many unanswered questions about the tutors involved in a GRR program. For example, were they volunteer tutors or paid tutors? Many non-profits struggle for funding and staff. Any program that necessitates one-on-one in depth intervention is unfortunately too costly to implement—just paying that many tutors would be prohibitive, let alone training them in that much depth. Simply implementing GRR or any similar fluency-based program would likely be impossible for an ABE program because of budget and staffing restraints, and it would leave little time for any other kind of literacy instruction. The authors indicated they hoped to conduct future research to see if GRR could be operational in a small group context, which would be a useful step forward.

### **Effective Fluency Interventions**

Overall, we like what the researchers are trying to do with GRR, and we think the self-reports of the students are promising. However, we suspect any program working so closely with individual students would see similar motivational and self-efficacy gains, as individual attention can do a lot for a student. We appreciate that the researchers admit there was a lack of follow-up in their study to see what the effects of this program were long-term, and we advise against implementation for something this labor-intensive until it has been proven to have long-lasting effects.

While there is still more research needed before we can confirm fluency training has an effect on adult literacy levels, if adult literacy practitioners are interested in incorporating fluency activities into their curriculum, below are fluency strategies that have been proven to be effective in K-12 settings that we suggest trying in adult education classrooms. While these fluency strategies are worth trying, we recommended them with caution and acknowledgement

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*We recommended [these strategies] with caution, as research findings developed with children in traditional school settings do not always translate to adults.*

- Include repeated reading in the classroom: a student rereads a text aloud until s/he can read it with little difficulty (Armbruster, Lehr, & Osborn, 2003).
- Vary texts: have students read aloud a variety of texts, but still read them repeatedly (Rasinski, 2012).
- Model fluent reading with a focus on prosody: model how vocal emphasis in reading a sentence aloud changes meaning and have students practice. This can also be done through performance such as reader's theater (Armbruster et al., 2003; Rasinski, 2012).
- Use short pieces that do not cause students to focus primarily on recognizing and decoding words (Armbruster et al., 2003).
- Engage in paired reading: in pairs, students read sections of a text out loud to each other. They give each other feedback on their reading. Students reread the text until they (and the teacher) feel they are reading it well. (Teachers float around the classroom, assisting with vocabulary and prompting students to decode difficult words. Teachers also assess appropriateness of text difficulty.) (Armbruster et al., 2003; Shanahan, 2012).
- Utilize choral reading: everyone in the classroom reads aloud as a group along with the teacher. The text should be at a good reading level for most of the students in the class. (Armbruster et al., 2003).
- Encourage students to read along to an audiobook—this can be done at home (Armbruster et al., 2003).

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*This study brings attention to the potential gains that can be made by shifting our collective focus to include more fluency activities.*

Be aware:

- Avoid round robin reading: Students each read for such a short amount of time that little benefit can be garnered (Shanahan, 2012).
- Do not focus only on speed: the goal is to also increase comprehension and develop recognition of punctuation (Rasinski, 2012).
- Silent reading has not been shown to increase fluency (Armbruster et al., 2003).
- Fluency should also be assessed; do not include it in your course if you are not going to include purposeful, consistent challenge (Armbruster et al., 2003; Rasinski, 2012; Shanahan, 2012).

In closing, it is admirable that the authors are trying to highlight reading fluency in the adult population, and this study brings attention to the potential gains that can be made by shifting our collective focus to include more fluency activities. However, we believe more research is needed to confirm that

fluency is a major area to which we, as a field, need to give more attention, and more innovation is needed to create programs that will be effective and realistically implemented in the classroom.

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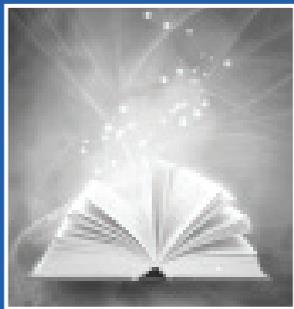
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## References

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- Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *Put reading first: The research building blocks for teaching children to read*. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement (CIERA).
- Division of Adult Education and Literacy, Office of Vocational and Adult Education. (2015). *Implementation guidelines: Measures and methods for the National Reporting System for Adult Education* (Contract No. ED-VAE-10-O-0107). Washington, DC: U.S. Department of Education. Retrieved from <http://www.nrsweb.org/docs/implementationguidelines.pdf>
- Rasinski, T. V. (2012). Why reading fluency should be hot! *The Reading Teacher*, 65(8), 516–522.
- Shanahan, T. (2012). Developing fluency in the context of the effective literacy instruction. In T. V. Rasinski, C. L. Z. Blachowicz, & K. Lems (Eds.), *Fluency Instruction: Research-based Best Practices* (pp. 17–34). New York: Guilford Press.
- Shore, J., Sabatini, J., Lentini, J., Holtzman, S., & McNeil, A. (2015). Development of an evidence-based reading fluency program for adult literacy learners. *Reading Psychology*, 36(1), 86–104. doi: 10.1080/02702711.2013.835294

## RESOURCE REVIEW



*Reviewed by  
Cynthia Zafft*

*World Education, Inc.*

### **Staying Healthy for Beginners: An English Learner's Guide to Health Care and Healthy Living Teacher Guide**

**By Florida Literacy Coalition, Inc.**

2014; Kratos Learning for U.S. Department of Education, Office of Career, Technical and Adult Education, Washington, D.C. Available for free download at <http://lincs.ed.gov/publications/pdf/StayingHealthyTeacherGuide2014.pdf>

To help adult educators incorporate health literacy in their adult education instruction, the Florida Literacy Coalition (FLC) has published the *Staying Healthy* curriculum series (see [http://floridaliteracy.org/health\\_literacy\\_curriculum.html](http://floridaliteracy.org/health_literacy_curriculum.html)). The *Staying Healthy* series takes a skills-based approach to health literacy, an approach that allows teachers to focus on the reading, writing, and communication skills that their students need to find health information, connect with health care centers, and carry out a range of activities needed for healthy living. This approach builds on the teacher's existing expertise and focuses on skills that they can reasonably work on in a classroom setting (Soricone, Rudd, Santos, & Capistrant, 2007).

This review covers a recent publication in the series, *Staying Healthy for Beginners: An English Learner's Guide to Health Care and Healthy Living Teacher Guide* (2014). This publication has an accompanying student guide, *Staying Healthy for Beginners* (Kurtz-Rossi, Valier, & Smith, 2014), aimed at instruction for English Speakers of Other Languages (ESOL) at the high beginning ESOL level. The teacher guide follows the student guide but adds an explicit list of health skill and language learning objectives, CASAS competencies, directions for leading activities

in the student guide, and suggestions for practice and extension activities. Chapter topics include U.S. health care options, communicating with health care providers, understanding medicines, healthy meal planning, and a “mini-chapter” on setting goals for a healthy lifestyle. Chapters 1-4 include *Cultural Notes* that suggest discussion topics to encourage students to share their experiences and cultural beliefs and *Good to Know* pointers on health topics or using the health care system.

*Staying Healthy for Beginners Teacher Guide* has several features that teachers new to using a health literacy context will find very appealing. First, teachers do not need specialized health knowledge beyond an interest in helping students become more skillful health consumers. This is clearly stated in the introduction and is borne out in the teaching activities described throughout the resource. Second, the guide provides brief general and chapter-specific directions based on a straightforward learning cycle. The teacher introduces each chapter through individual and group reflection using an engaging photograph; presents a small number of health-related vocabulary words; uses short reading, writing, listening, and speaking activities to develop vocabulary skills; and, extends learning with suggestions for integrating technology and activities outside of the classroom. Third, the teacher leads a variety of in-class and out-of-class learning activities that students will find interesting and challenging, such as completing a Venn diagram that compares and contrasts prescription and over-the-counter drugs and using the 211 Helpline telephone number for locating information about local health and human services. In addition, teacher can access the entire *Staying Healthy* series online for more in-depth information, if needed.

The guide has some limitations. Teachers will need to challenge themselves to explicitly integrate the important information in the *Cultural Notes* and *Good to Know* sections into their instruction. For example, one *Good to Know* idea suggests that students consider requesting an interpreter for medical appointments. While this is briefly touched on in the student guide, the teacher would need to develop more opportunities for student practice. Interpreting services have the potential to decrease communication errors, increase patient comprehension, equalize health care utilization, improve clinical outcomes, and increase satisfaction with communication and clinical services for individuals with limited English language proficiency (Karlner, Jacobs, Hm Chen, & Mutha, 2007). In addition, both the teacher and student guides focus on doctors although students may see other types of health care providers, such as nurse practitioners. The guide does not spell out

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how *Staying Healthy for Beginners* fits into the overall ESOL curriculum or exactly what to do if students cannot afford care or access health insurance. Interestingly, the teacher guide does not include an explicit definition of health literacy. The teacher and student guides and activities, taken together, implicitly frame health literacy as an asset that equips people to navigate the health care systems, critically assess information, and take more control of their health (Mooney & Prins, 2013).

*Staying Healthy for Beginners: An English Learner's Guide to Health Care and Healthy Living Teacher Guide* (2014) is an easy-to-use resource that will help teachers implement the *Staying Healthy for Beginners* student guide. It capitalizes on this area of high interest and relevance for ESOL learners and guides teachers with straightforward directions, focusing on core health literacy skill-building and language acquisition activities. Similar to earlier publications in the series, the *Staying Healthy for Beginners* curriculum and guide makes a positive personal and societal contribution through health literacy and language instruction.

**Cynthia Zafft** is Principal Investigator for the Literacy Information and Communication System (LINCS) Region 1 Professional Development Center located at World Education, Inc. and national moderator of the LINCS Health Literacy Community of Practice. LINCS is the professional learning platform for adult educators funded by the U.S. Department of Education.

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## References

- Karliner, L.S., Jacobs, E.A., Hm Chen, A., & Mutha, S. (2007). Do professional interpreters improve clinical care for patients with limited English language proficiency? A systematic review. *Health Services Research, 42*(2), 727-754.
- Kurtz-Rossi, S., Valier, C., & Smith, G. (2014). *Staying healthy for beginners: An English learner's guide to health care and healthy living*. Orlando, FL: Florida Literacy Coalition, Inc. Retrieved from [http://floridaliteracy.org/literacy\\_resources\\_\\_teacher\\_tutor\\_\\_health\\_literacy.html](http://floridaliteracy.org/literacy_resources__teacher_tutor__health_literacy.html)
- Mooney, A. & Prins, E. (2013). Addressing the health literacy needs of adult education students. *Practitioner's Guide #4*. May 2013. Goodling Institute for Research in Family Literacy, PennState College of Education.
- Soricone, S., Rudd, R., Santos, M. & B. Capistrant. (2007). *Health literacy in adult basic education: Designing lessons, units, and evaluation plans for an integrated curriculum*. Cambridge, MA: National Center for the Study of Adult Learning and Literacy/ Harvard University.

## BOOK REVIEW



*Reviewed by  
Jenifer B. Vanek*

*University of  
Minnesota*

## Blended Learning for the Adult Education Classroom

By David J. Rosen and Carmine Stewart

2015; Essential Education Corporation, Inc.  
Available for free download at [http://app.essentialed.com/  
resources/blended-learning-teachers-guide-web.pdf](http://app.essentialed.com/resources/blended-learning-teachers-guide-web.pdf)

The purpose of *Blended Learning for the Adult Education Classroom* is to provide information and resources for teachers and administrators in Adult Basic Education (ABE) to use to design and implement blended learning, broadly defined in the book as “a teaching and learning model that has a face-to-face class or tutorial component combined with an online learning component” (p. 3). The guide is practical, providing links to resources and concise explanatory text making suggestions about implementation. Written with the practitioner in mind, it draws on educational theory without being too theoretical in its presentation. Rather than offering prescribed guidelines, the authors encourage readers to consider the included resources in light of what is suitable for their own learners. As such, it is an invitation to engage in blended learning, perfect for its intended audience.

Rosen and Stewart embrace the perspective that a blended learning approach in ABE can enhance both instruction and student learning. Indeed, the book begins with a comprehensive list of potential benefits for students and programs. This perspective is evident throughout the book’s sections, which include examples of model programming and

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*The first three sections define blended learning and suggest strategies for getting started.*

instruction through vignettes illustrating the strategies for using specific resources.

The first three sections define blended learning and suggest strategies for getting started in a variety of settings and with students possessing varying experience using online technologies. This “how to” shows exactly what teachers have done in specific contexts. The section also provides tools to help one better understand the technology landscape of both program site and learners, and how to use that information to make decisions.

The next sections provide guidance on the selection of online platforms that teachers might use to organize blended instruction, including both proprietary/prepackaged curricula and teacher-created webpages. Also included is guidance for teachers who need to select online resources to enrich their own instructional websites. The authors describe various ways teachers can deliver instruction in the online part of blended learning, including email, Skype, threaded discussion, and selecting instructional videos, emphasizing that the choice determines how student learning will be facilitated.

The final sections contextualize use of blended learning into broader educational innovations, for example: digital badging, integration of College and Career Readiness Standards, formative assessment, learning portfolios, mastery learning, and flipped classrooms. The authors show how adoption of blended learning can support integration of these innovations.

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*Contextualization increases the guide’s utility by sharing not just tools but also how teachers might use them.*

The guide does not claim to be a report of research on the effectiveness of specific strategies or resources included; rather, it is a survey of strategies that practitioners have found useful. The authors weave descriptions of learning technologies and online resources into different “pictures” of what blended learning may look like. This contextualization increases the guide’s utility by sharing not just tools but also how teachers might use them. I believe this to be the main strength of the guide. The resources named surely will become obsolete and the links will be broken, but the lessons about tool selection and examples of their integration into instruction should be lasting.

A shared characteristic of the recommendations is that they have the potential to support learner-centered instruction. Readers should use the publication as a guide—following the links to construct their own conceptualization of blended learning, knowing that authors were incredibly comprehensive in their survey of resources. Such an approach will ensure that the intent of the guide—that blended learning supports learners—is realized as practitioners make choices based on what they know about their learners.

The book concludes with a brief discussion of the future of blended learning and its potential contributions to positive education reform if its implementation is linked to other initiatives (i.e., technology integration, professional development, competency-based programming). This suggestion should serve as a springboard for future discussions about blended learning, specifically with respect to policy and future research.

The authors do not call for policy reform, but I think the abundance of quality resources included beg the question of the suitability of current ABE distance education policy. ABE programs often depend on proxy contact hour reimbursement to support their distance education initiatives. This policy structure privileges the use of state-approved proprietary curricula because local ABE programs may get funding based on content completion and/or student time spent using them. When teachers make use of Open Educational Resources (OERs) or create their own instructional websites based on quality resources (like those included in the guide) they may not be approved for proxy contact hour reimbursement. This potentially delimits programmatic support for use of innovative and inexpensive options for blended learning.

The guide illustrates that the nature of Web 2.0 has stretched the utility of the current funding approach; online resources have become more plentiful, teachers more tech-savvy, and learners more accustomed to self-directed and differentiated use of online materials. These realities need to be evident in blended learning instruction and the policies that define what is allowable (or fundable). To ensure the quality of more widespread implementation of innovative practice, use of OERs, and teacher-created resources, both empirical qualitative research and experimental studies are needed on the efficacy of blended learning strategies. Learning from such research can help inform new policies.

This guide is a timely, valuable contribution to practitioners and administrators in the field. The national legislation defining ABE, the Workforce Innovation and Opportunities Act, not only supports the use of technology but also allows states to use funds for new technologies to support distance education, among other applications. The impact of this new federal language is likely to be an increased demand for blended learning. Rosen and Stewart's guide can inform new blended learning initiatives through the guidance it provides to instructors and by making clear to administrators the scope and complexity of the work. This will result, I hope, in adequate support for the technologies and professional development required for innovations to

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*The guide illustrates that the nature of Web 2.0 has stretched the utility of the current funding approach.*

succeed. I encourage readers to engage in the conversation this inviting guide introduces. By all means read this free book online! Follow the links, dive-in, and experiment with some blended learning.

**Jen Vanek** is a doctoral student in Second Languages Education at the University of Minnesota, where she teaches in the TESL Minor program. She has been working in the field of adult English language learning since receiving an MA TESOL from the University of Illinois-Chicago in 1995. She's supported learners on college campuses, at adult learning centers, and in workforce centers and factories. Jen's current work centers on research, creating online content, and supporting the professional development of teachers in the areas of ESL, digital literacy, distance learning, and adult career pathways.

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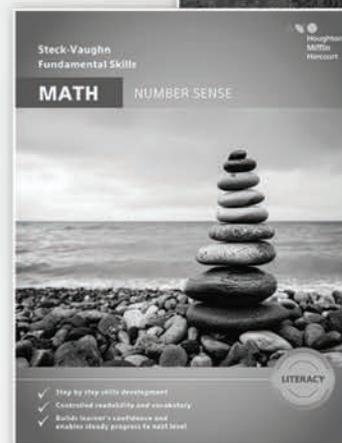
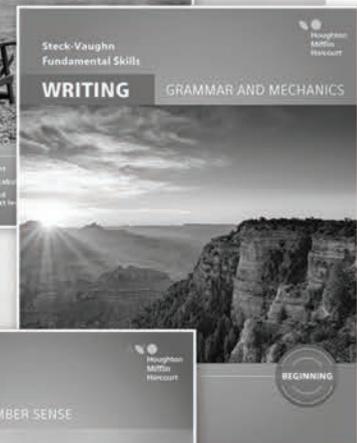
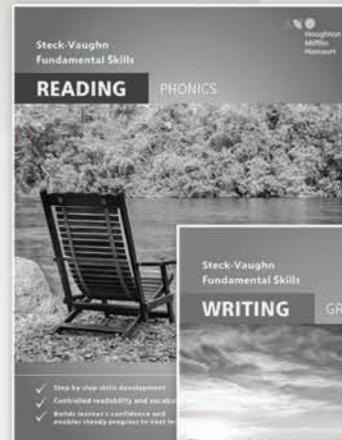
*This guide is a  
timely, valuable  
contribution to  
practitioners and  
administrators in  
the field.*

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# ADULT EDUCATION: TODAY'S MAGIC FOR TOMORROW'S DREAMS!



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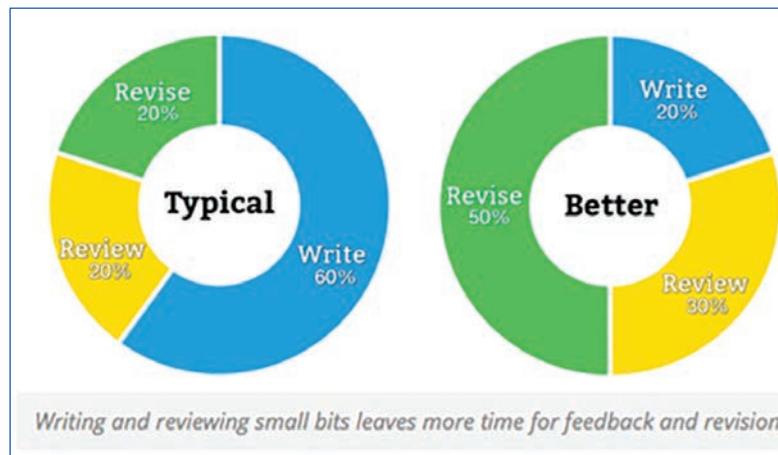
## WEB SCAN



### Websites for Assessing Writing

In the K-12 world, there are now many, often free, websites to help teachers and students assess writing. Some are intended to help teachers design writing assessment tools for their students; others are for students to review their own—and other students’—writing. Here are several websites for assessing writing that may be useful for adult learners.

#### Writing Assessment Websites



*Reviewed by  
David J. Rosen*

*Newsome  
Associates*

#### 1. Eli Review

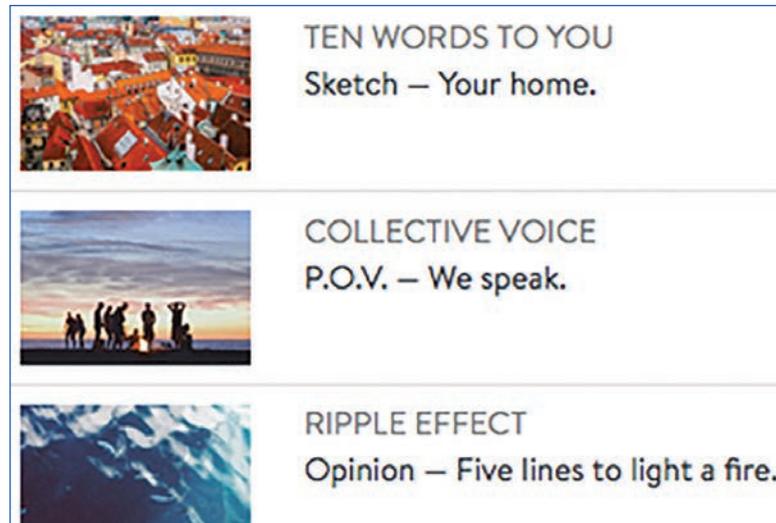
<http://elireview.com/>

Students are writers and reviewers of other students’ writing using a systematic, online application that strengthens their writing skills as they critique other students’ writings. Their critiques are rated for helpfulness by the writers they review. Teachers can also weigh in, but don’t necessarily, especially if their goal is to strengthen students’ skills as reviewers.

## 2. Peerceptive TM (formerly SWORD Peer Assessment)

<http://www.peerceptiv.com/>

This is a multiple peer review website that makes assessment part of the writing and learning process. Students review each other's work online, anonymously. The students are held accountable for the quality and specificity of their reviews, so the task is taken seriously.



## 3. Write the World

<http://writetheworld.com>

Although described as a “global community of young writers” some of the writers are into their twenties, and many of the growing number of writing prompts are suitable for any age. The website is free, but signing up may be required to have one's writing published. The “How it Works” page emphasizes that this encourages a new writer to “establish a daily writing practice and expand your repertoire of writing styles, all the while building your portfolio of polished work.”

On the website are writing competitions and challenges, and those who enter can receive comments on their writing from authors, writing teachers, and other writing experts. Write the World, as the name suggests, assumes writing as a social act of writing for an—in this case—international audience as well as getting comments from readers and other writers. For those who may be interested, one can also earn digital badges for publishing writing, entering writing competitions, supporting other writers, and reviewing their work.

## 4. Google Apps or Google Classroom

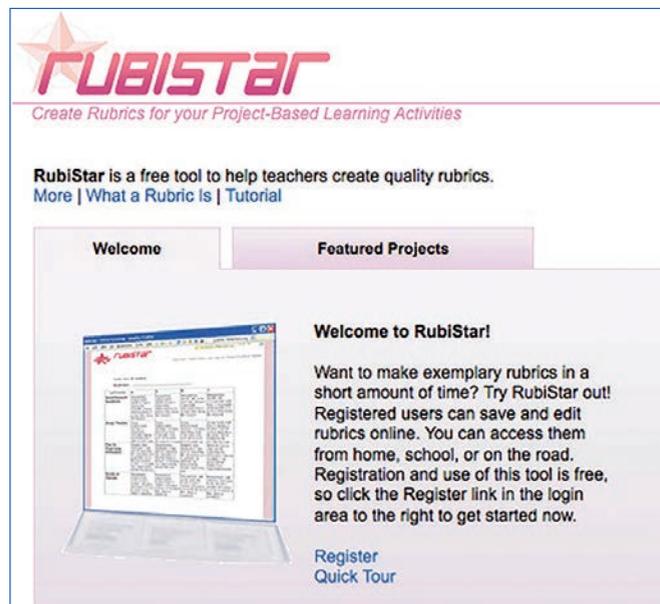
This EdSurge blog article <https://www.edsurge.com/news/2015-08-27-instead-of-paying-thousands-for-student-data-systems-try-this-free-option-instead> is important for adult basic skills writing teachers who are interested in efficient and effective ways to assess student writing. The author, Chris Aviles, a New Jersey high school writing teacher, advocates not buying assessment software but, using Google Forms, Sheets and Folders, building a writing assessment system yourself, one that involves students not only as (blog essay, not traditional essay) writers, but also as assessors. As is usually the case, he finds that students are a little tougher in their grading than he is.

Those who are interested in formative assessment writing tools will want to read this article, not only because Aviles has found a better way to evaluate student writing, but also because the assessment system he has created using free Google tools appears to be worth considering.

## 5. Constructing Checklists and Rubrics

Many writing teachers find or develop rubrics for evaluating student writing. If you can't find an existing rubric that meets your needs (See, for example, Rubrics for Teachers, <http://www.rubrics4teachers.com/or> teAchnology: Rubrics, [http://www.teach-nology.com/web\\_tools/rubrics/](http://www.teach-nology.com/web_tools/rubrics/)) you can make your own. Here are two free tools to help you:

- **PBL Checklists**, <http://pblchecklist.4teachers.org/checklist.shtml>, has free writing checklists at elementary and secondary levels. You select a list of criteria for a particular level, and then check the specific criteria you want to assess. You can also add your own criteria. Then you can print the customized checklist for students to use to assess their writing.



- **RubiStar**, <http://rubistar.4teachers.org/index.php>, enables a teacher to create, save, edit and publish writing rubrics online. You use a template, but there are many ways to individualize the resulting rubric. The rubrics created from the template use a four-point scale. After selecting a template, you choose assessment categories from a pull-down menu. You can also add your own items to the rubric, or modify the wording of any of the existing criteria.

All these writing assessment websites and tools have in common a shift from the teacher as the sole evaluator of students' writing to systematic and effective ways for students to evaluate their own, and each other's, writing. The tools and websites enable more rapid feedback, greater engagement in both writing and writing evaluation, and a stronger connection between the criteria for evaluating writing and the act of writing.

**David J. Rosen** is an education consultant in the areas of adult education, distance education and technology.



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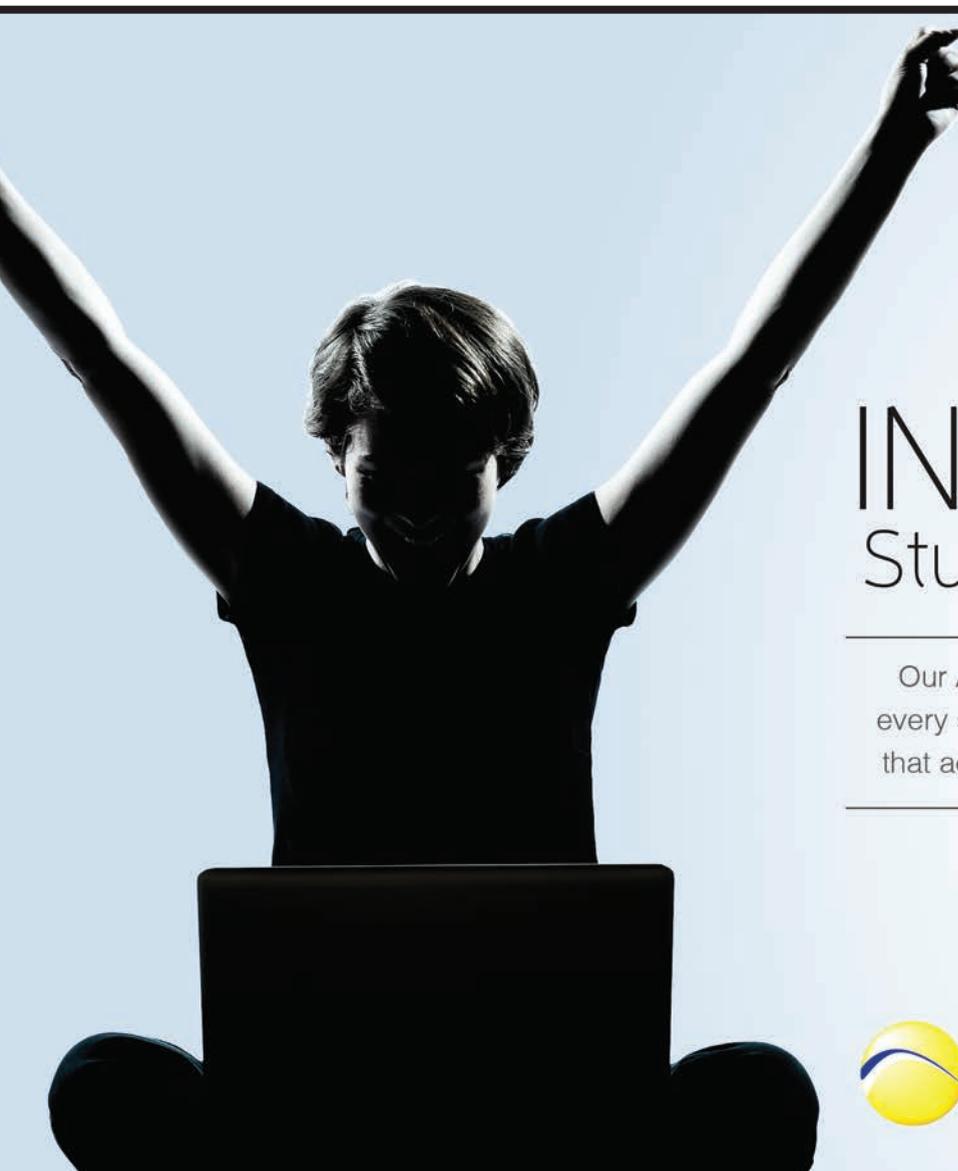
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