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Adult Literacy Education:

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MISSION STATEMENT

The journal's mission is to publish research on adult basic and secondary education and transitions to college and career programs. It informs practitioners, researchers, policy makers, and funders about best practices in adult literacy, numeracy, and English language education in publicly funded, community and volunteer-based programs in a wide range of contexts. Each issue will consist of research articles focused on a particular theme plus other content of interest to readers (e.g., resource reviews, opinion pieces, and debates and discussions on timely topics of interest to the field).

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Welcome

Dear Readers,

Welcome to the Special Issue on *Broadening the Lens on Adult Literacy Education Outcomes*. Federal policy and funding for adult literacy education in the United States has increasingly focused on a relatively narrow set of short-term outcomes in recent decades, namely employment and transition to postsecondary education and training. As important as these outcomes may be, there are other important life changes that adult education and enhanced adult literacy may bring about, and the short-term measurement of narrow program outcomes often fails to capture the longer-term and more substantial and transformational changes that adult education can bring about.

This special issue explores research, policy and practice that looks at adult literacy education through broader and longer-term lenses. A rich set of articles considers diverse types of learning outcomes and longer-term measurement and evaluation of outcome trajectories. The editors and I hope the special issue -- through its research and viewpoint articles, forum, research digest and technology columns -- offers a rich, cross-national perspective on alternative ways to think about designing, implementing and evaluating adult basic skills education.

The special issue begins with two peer-reviewed research articles. The first research article, by J.D. Carpentieri, David Mallows, and José Pedro Amorim is entitled *Credibility, Relevance, and Policy Impact in the Evaluation of Adult Basic Skills Programs: The Case of the New Opportunities Initiative in Portugal*. It explores how the nature of the outcome measures and methodologies used in program evaluations influence findings about program impact and how these findings in turn influence policy and funding for programs. Two major evaluations of a national adult education program in Portugal are compared as a case study of these issues. The importance of long-term outcome measures is highlighted.

Margaret Patterson's research article, *PIAAC Numeracy Skills and Home Use Among Adult English Learners*, examines the importance of numeracy skill use outside of the workplace among first generation immigrants attempting to navigate daily life and understand health information. The findings suggest that numeracy skill use at home may play a key role in shaping the successful adjustment of adult immigrants. Recommendations are made for program designs and evaluations to be broadened to include numeracy skill use measures as outcomes.



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The special issue also includes a peer-reviewed viewpoint article by Jen Vanek, Heide Spruck Wrigley, Erik Jacobson and Janet Isserlis, entitled *All Together Now: Supporting Immigrants and Refugees Through Collaboration*. This opinion piece considers a number of important examples of and recommendations for cross-sector and cross-agency collaboration in program design and advocacy. The rich discussion of these examples and issues illustrates the benefits of broadening the range of outcome measures and program designs being funded under current federal policy in the United States. A compelling argument is made for collaborative approaches to designing, implementing and evaluating programs to enhance the adjustment and integration of adult immigrant and refugee learners and their families and communities.

These articles are followed by a Forum article by me entitled *A Lifelong and Life-Wide Framework for Adult Literacy Education*. In this piece, I argue that adult education programs need to operate within a much broader framework of learning outcomes, supported by policies, funding and professional development that value lifelong and life-wide learning. Two responses to my Forum piece are written by Judy Mortrude, *Examining the Role of Federal Adult Education Funding in Adult Literacy Education*, and Ira Yankwitt, *Toward a Vision of Movement Building in Adult Literacy Education*. Their responses add much depth and richness to the proposed framework, drawing on their extensive experience as practitioners, program directors and advocates in the field of adult education. They also offer practical examples and suggestions for steps the field can take along the path forward.

Two topical columns also address the focus of this special issue. Bob Hughes and Christine Knighton contribute a Research Digest entitled *Are Transitions a Sufficient Goal for ABE Students or Programs?* David Rosen's column, *Technology Solutions for Adult Basic Skills Challenges*, considers *Assessing and Teaching Adult Learners' Basic and Advanced 21st Century Digital Literacy Skills*. These columns offer important reflections on and resources for the special issue's focus on broadening the lens on adult literacy outcomes. Readers seeking information about recent developments in adult education in the United States will be interested in Elisabeth Gee's book review of *Turning Points: Recent Trends in Adult Basic Literacy, Numeracy, and Language Education*.

Thanks to the authors, peer reviewers and editors of the Journal for their important contributions to this special issue. I hope you enjoy it and that it helps broaden your thinking and work on this important topic.

Stephen Reder, Portland State University
Special Issue Editor

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David J. Rosen

Credibility, Relevance, and Policy Impact in the Evaluation of Adult Basic Skills Programs: The Case of the New Opportunities Initiative in Portugal

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Abstract

Adult basic education (ABE) policies aim to help adults improve their literacy, numeracy and information and communications technology skills, as well as their qualifications, often in pursuit of economic gains such as better employment and earnings. The large-scale improvement of skills and qualifications has been referred to as a wicked policy problem, suggesting that it is extremely difficult and perhaps even impossible to achieve success in this policy domain. Evaluations have highlighted these challenges, with many programs showing little or no impact. Between 2006 and 2012, the Portuguese government ran a large-scale adult education program, the New Opportunities Initiative (NOI), which focused on the recognition and validation of adults' existing skills and the development of literacy and numeracy. The NOI was evaluated twice, in 2009 and in 2012. These two evaluations produced very different findings and outcomes: the first evaluation found the NOI to be a success, and led to continued investment, but the second evaluation reached more negative conclusions and was used as a rationale for de-funding the program. In this article we analyze these two sets of evaluations, investigating the reasons for their starkly different conclusions. We find that, while both evaluations had strengths, they also suffered from serious methodological and/or theoretical weaknesses. These weaknesses are *part of a broader pattern of evaluation errors* that characterize the field of ABE more generally and which make it more likely that ABE policies will continue to fail. Using the conflicting NOI evaluations as case studies, we offer potential solutions to ABE's evaluation problem, emphasizing the need to collect long-term longitudinal evidence on the causal mechanisms through which policy goals may be achieved.

Author Note: The contribution of Dr Amorim to the development of the paper was supported by the Portuguese Foundation for Science and Technology (FCT) and by the European Social Fund – Human Capital Operational Programme (POCH) from Portugal 2020 Programme –, in the framework of the contract established under the transitional rule of Decree Law 57/2016, amended by Law 57/2017; and by the Portuguese Government, through the FCT, under the strategic funding awarded to CIIE – Centre for Research and Intervention in Education [grant no. UID/CED/00167/2013; UID/CED/00167/2019]. There are no relevant stipulations to this funding.

In modern economies, qualifications and skills are increasingly important. Studies such as the Programme for the International Assessment of Adult Competencies' (PIAAC) Survey of Adult Skills (OECD, 2013) highlight strong correlations between low qualification levels, low levels of literacy and numeracy, and negative outcomes such as low wages, unemployment, poor health, and reduced social and political engagement. Comparisons of British cohorts born in 1958 and 1970 indicate that the negative impacts of poor basic skills and low qualifications grow over time as economies evolve (Bynner, 2002), and have lifelong impacts (Parsons & Bynner, 2007). Such evidence has had an impact on policy, moving skills and qualifications from the margins to the mainstream of policy (Hamilton & Hillier, 2006), and encouraging governments to invest in adult basic skills, e.g., programs such as England's Skills for Life (Department for Innovation, Universities and Skills, 2007) as well as more general adult education interventions such as Sweden's Knowledge Lift (Albrecht, Van den Berg, & Vroman, 2005). However, with very limited exceptions (Gyarmati et al., 2014), evaluations of such interventions have shown little or no impact on participants' basic skills (Carpentieri, 2015; Reder, 2016), nor on their earnings or employment outcomes (Albrecht et al., 2005; Metcalf & Meadows, 2009). These null findings have proven problematic for advocates of such programs.

Schwandt (2009), a leading theoretician of evaluation science, emphasizes the need for

evaluations to be credible and relevant, at both methodological and theoretical levels. Methodological credibility refers to the trustworthiness of the evidence used in the evaluation: can we believe the information presented to us? Methodological relevance focuses on whether that evidence is appropriate for addressing the evaluation's research questions. Methodological credibility and relevance play a central role in evaluation's legitimization function (Legorreta, 2015), through which governments demonstrate that: (a) they are acting on evidence and reason rather than instinct and ideology, and (b) their policies are effective and resources are being used wisely. This legitimization function is essential within the modern welfare state, which is characterized by a demanding public and competing claims for investment (Le Grand, 2003; Pierson, 2001).

In addition to generating methodologically credible and relevant evidence, evaluations need to be theoretically credible and relevant. Theoretical credibility refers not to the quality of an evaluation's evidence but to the appropriateness of its design (Schwandt, 2009). An evaluation may produce methodologically robust evidence, but be based on an inaccurate understanding or "program theory" (Chen, 1990; Pawson & Tilley, 2004; Weiss, 1995) of how change may be achieved, and thus provide an inaccurate assessment of an intervention's outcomes, impacts or value. Program theory describes the processes through which programs are presumed to

produce outcomes (Donaldson & Gooler, 2003); the direct and indirect causal pathways through which programs are hypothesized to achieve their aims (Chen, 1990; Weiss, 1995). Program theory focuses on mechanisms, by which we refer not to program activities but to the changes within the participants that those activities facilitate. These changes, in turn, may lead to the desired outcomes. Programs are not simply assumed to create change by their very existence, they are instead grounded on theoretical assumptions about the processes through which outcomes will be achieved (Pawson & Tilley, 2004). For example, a program theory may be simple and linear, e.g., a program's "dose" of literacy instruction will directly increase adults' literacy skills, or more complex, e.g., a program will increase adults' literacy practices, and these increases in practices will in turn serve as mechanisms that contribute, over a sufficient amount of time, to improvements in literacy skills (Reder, 1994, 2009a, 2009b, 2012, 2014a). If a literacy program is implicitly or explicitly based on the more complex of these two theories but the evaluation of that program is based on the simpler theory, there will be a mismatch between program theory and evaluation design, thus weakening the evaluation's theoretical credibility.

Loss of credibility through theoretical misspecification occurs even if the evidence used

by an evaluation is methodologically credible and relevant. For example, if an adult literacy program focuses primarily on improving participants' literacy practices (perhaps as a means towards long-term improvement of literacy skills), but an evaluation of that program focuses only on short-term impacts on literacy skills, the evaluation is not a credible assessment of the intervention's impacts, no matter how robust the evidence it has collected: the theory that the evaluation is testing is not the same as the program theory underpinning the intervention itself.

In addition to being theoretically credible, evaluations should be theoretically relevant. Theoretical relevance refers to the contribution of an evaluation to knowledge cumulation (Pawson & Tilley, 2004). Knowledge cumulation may refer to the assessment of an individual program via an evaluation, or an evaluation's broader contribution to program theory within the field, i.e., its contribution to increased understanding of the causal pathways through which programs may achieve their aims (Pawson, 2013). Table 1 provides a summary overview of methodological and theoretical credibility and relevance.

Wicked Policy Problems

The centrality of evaluation-based decision-making may present particular challenges when

Table 1: Methodological and theoretical credibility and relevance

	METHODOLOGICAL	THEORETICAL
Credibility	Trustworthiness or believability of the evidence	Appropriateness of the evaluation design for assessing intervention impact
Relevance	Appropriateness of the evidence for addressing the evaluation's research questions	Contribution of the evaluation to knowledge cumulation

governments seek to address so-called “wicked” policy problems such as adult skills and education (Payne, 2009). Wicked policy problems have a number of characteristics (Alford & Head, 2017; APSC, 2007; Rittel & Webber, 1973) that make it difficult to develop successful interventions, or to develop appropriate evaluation designs for assessing success. A wicked policy problem is likely to have multiple, overlapping causes or antecedents, and multiple, overlapping consequences. There is social complexity at the user level: “individual” problems are influenced by an individual’s family, community, and other social networks. This social complexity is mirrored at the intervention level, with service provision likely to require the cooperation of multiple agencies across multiple government departments and/or policy domains. Perhaps most importantly from an evaluative standpoint, the mechanisms of causal change to address wicked problems may be complex or difficult to identify and are likely to require long-term behavior change. Unsurprisingly, wicked policy problems are likely to be associated with a history of chronic policy failure, with efforts to address such problems having failed repeatedly and across a range of contexts: while the policy problem may be clear, the “solution” is likely to be difficult to identify and operationalize. This has certainly been the case in adult skills (see e.g., Albrecht et al., 2005; Carpentieri, 2015; Metcalf & Meadows, 2009; Reder, 2016).

In this paper we will argue that, when evaluating interventions targeted at wicked policy problems such as adult skills, methodological credibility and relevance are necessary but insufficient evaluation conditions. Evaluations of adult skills programs have too frequently settled for methodological

credibility and relevance while under-emphasizing the importance of theoretical credibility and relevance. As such, they have potentially reached inaccurate conclusions about program impact and have certainly made insufficient contributions to knowledge cumulation. Wicked policy problems demand that evaluations seek not just to evaluate individual initiatives but to move the field forward through cumulation of knowledge about how programs might work, why, for whom and in what contexts (Pawson & Tilley, 2004).

One of the most ambitious policies aimed at addressing the wicked problem of adult skills and qualifications was Portugal’s New Opportunities Initiative (NOI), which ran from 2005 to 2013. NOI was a large-scale adult education and training program with a focus on the recognition and validation of adults’ existing skills and the development of literacy and numeracy. The Portuguese adult population has one of the lowest levels of high school completion in Europe (Eurostat, 2019).¹ The NOI was an attempt to address this under-qualification (MTSS/ME, 2006) by providing routes through which adults could achieve school-level qualifications through adult education. As such, the NOI represented a “paradigm change in policy” (Carneiro, 2011, p. 29) that would systematically and sustainably address the chronic policy failure characterizing adult education and skills in Portugal.

The NOI was subject to two evaluations, in 2010 and in 2012. The first evaluation concluded that NOI was achieving its aims. The second drew the opposite conclusion and was used as justification for the cancellation of the policy. In this article we analyze these two sets of evaluations, investigating the reasons for and impacts of their different

¹ In 2005, when NOI was launched, only 26% of the adult population had at least upper secondary, far from the 68% OECD and EU average (OECD, 2007). Nowadays, this figure has increased to 49% in Portugal and 78% in EU (Eurostat, 2019).

conclusions. In doing so, we draw comparisons between the NOI evaluations on one hand and evaluation approaches in adult basic skills on the other. The paper is structured as follows. After first describing the Portuguese policy context and the evaluation's goals, methods and findings, we then assess the credibility and relevance of the two sets of NOI evaluations, at both the methodological and theoretical levels. After discussing the policy uses of these evaluations, we conclude by providing recommendations for an evaluation strategy suitable to a broad range of wicked policy problems, including adult basic skills.

Telling the Story: The New Opportunities Initiative, the Political Context and the External Evaluations

The New Opportunities Initiative

The NOI was an unprecedented, large-scale national program of adult education that ran from December 2005 to March 2013. The NOI's main ambition was to "achieve mass schooling at the level of [upper] secondary" (MTSS/ME, 2006, p. 10). Within the initiative, secondary education was seen as "the minimum level" necessary for individuals to function in the modern "knowledge-based economy," and to be able to acquire and retain, throughout life, new skills (MTSS/ME, 2006, p. 3). The NOI set out to "accelerate the qualification levels of the Portuguese people" (MTSS/ME, 2006, p. 10) through processes of recognition, validation and certification of competences (RVCC) and participation in adult education and training (AET) courses. Both routes, RVCC and AET courses, gave participants the possibility of gaining certificates of equivalence at primary,

lower, and upper secondary levels.

RVCC focused mainly on the collection of evidence of adults' lifewide and lifelong learning. That is, what they had learned throughout their lives, in formal, non-formal and informal contexts. However, not all knowledge was equally valued – the recognition and validation were limited to a set of competences defined by the frameworks for primary and secondary education. The AET courses, on the other hand, were designed mainly for the acquisition of new learning, although they did incorporate recognition of what participants already knew.

The First Evaluation, Coordinated by Roberto Carneiro

In 2007, the Ministers of Education and Labor invited Roberto Carneiro, ex-Minister of Education (1987-1991), to coordinate an external evaluation of the NOI. This started in April 2008 with a first set of evaluation results published in 2009 (Carneiro et al., 2009; Carneiro, Centro de Sondagens e Estudos de Opinião, Lopes, Cerol, & Magalhães, 2009a, 2009b; Carneiro, Liz, Machado, & Burnay, 2009; Carneiro, Mendonça, & Carneiro, 2009; Carneiro, Valente, Carvalho, & Carvalho, 2009) and a second set of results published the following year (Carneiro et al., 2010). The evaluation focused mainly on the perceptions of NOI of those involved as participants or professionals. Carneiro and colleagues took a primarily *emic* approach (Morris, Leung, Ames, & Lickel, 1999) to the collection of data, using focus groups, face to face and telephone interviews, case studies of NOI Centers, and an online survey to focus on stakeholder experiences of and perspectives on NOI. The evaluation engaged with

a broad range of stakeholders: adults enrolled in NOI,² adults who met conditions for access but did not apply, NOI professionals, employers, local opinion makers, civic associations, and academics.

One of the main foci of the evaluation was what Carneiro et al. (2010, p. 9) termed “the emergence of a brand.” Policymakers were keen to understand stakeholder perceptions of the NOI as a public policy, and as a brand signaling a shift in attitudes to ABE. The evaluation also focused on the quality of service of the NOI Centers and stakeholders’ satisfaction with this; the quality of the qualification processes and the assessment of key competences; and the impact of the initiative on participants.

The stated intention of the government in introducing NOI was to create massive brand awareness in order to affect a “paradigm change in policy” (Carneiro, 2011, p. 29), raising both awareness and credibility of adult education as a public good. Carneiro found that NOI was perceived, by target audiences and those who worked within the initiative, as a public (service) brand with clear values. It was seen as accessible, flexible and inclusive and as providing valorization of each individual and their life wide and lifelong experience of learning. However, the NOI “brand” was also perceived by stakeholders as being too closely linked to a specific political party and thus potentially time limited.³

NOI’s professionals recognized (and celebrated) NOI’s success indicators. However, the evaluation highlighted some indicators of inefficiency, such as adults remaining on waiting lists for long periods of time, as well as doubts about the comparability

of the learning systems employed at the centers. Of equal concern was the certification of the learning processes, with questions about the validity, rigor, and comparability of the processes used. Some small business owners were concerned about increasing training costs without evidence of short-term impact on business results. Local opinion makers (e.g., academics, journalists, commentators) were the most critical of NOI. There were also doubts about the relative ease and the short duration of the learning processes, on the one hand, and the school-like nature of much of the provision, on the other.

Participants also reported strong reinforcement of self-esteem and an increase in motivation to continue learning, as well as a general improvement in soft skills such as self-management and initiative, adaptability, interaction, and communication. Parents said that they felt better able to support their children in school.

The 2011 Election Campaign: A Shift of Government and Policies

The NOI was a flagship policy of the XVII and XVIII Constitutional Governments. Following victory in the 2005 election, the Socialist Party had introduced policies of modernization with the stated aim of closing the educational gap between Portugal and its more developed neighbors in Europe, which was deemed to have a negative impact on the economy, social cohesion and personal development (MTSS/ME, 2006).

The NOI was an important topic in the 2011 election campaign. The opposition candidate Pedro Passos Coelho of the Social Democrats, the main center-right party in Portuguese politics,

² The adults were at three different stages of the learning process: on a waiting list, in training (RVCC and AET courses), already certified.

³ NOI was a flagship policy of the Socialist Government (Carneiro, 2010) and had been the subject of heated cross-party debate. For example, during an election campaign, a representative of the Social Democratic party said that “the Engineer Sócrates [leader of the Socialist Party] is convinced that he can exchange diplomas for votes” (RTP, 2011).

argued that NOI was a “scandal” (JN, 2011), an expensive “mega-production⁴ giving credit and certifying ignorance.” He promised “an external audit” and the end of the NOI (RTP, 2011).

In the aftermath of these statements, Joaquim Azevedo, who contributed to Carneiro’s evaluation, said that a direct assessment of the quality of the training provided under NOI had not been carried out, as the evaluation focused on measuring the perceptions of those involved in the Initiative, and supporting the self-assessment of the New Opportunities Centers (Viana, 2011). Carneiro himself had noted that his evaluation had focused not on the quality and rigor of the certification process, but the perception of that quality and rigor among the people involved (Viana, 2011).

Shortly after the 2011 election, which was won by the Social Democratic party, the new Minister of Education and Science of the XIX Government, a coalition of the two right-wing parties in Portugal, criticized the NOI on the same grounds of inefficiency – NOI “ran poorly overall,” he argued (Crato, 2011) – and for the lack of rigor and consistency in the certification process, suggesting that “handing out diplomas is not the solution.” Following the election, a second evaluation of the NOI was commissioned by the new government.

The Second Evaluation, Coordinated by Lima

The second evaluation, coordinated by Francisco Lima, opted for an *etic* or outsider approach to program evaluation, explicitly taking a “diametrically opposed path to the previous evaluation” (Lima, Silva, & Fonseca, 2012b, p. 28).

Rather than seeking to understand the perceived impacts of the NOI on stakeholders’ lives, and the success or otherwise of the NOI in affecting a paradigm shift in popular understanding of adult education in Portugal, Lima et al. (2012a, 2012b) sought to measure participants’ performance in the labor market in just two dimensions: earnings and employment status.

Lima et al. (2012a, 2012b) did not collect primary data. Instead, they drew on secondary analysis of two large data sets: an NOI database which recorded the learning outcomes of participants⁵ and the national social security register of individuals’ unemployment and other social benefits. These two datasets were linked on an individual level, allowing for quasi-experimental comparison of earnings and employment status among matched NOI participants and non-participants.

Lima et al. (2012b) found that participation in processes of RVCC did not increase the probability of transition into employment, nor did RVCC typically have an impact on earnings.⁶ However, participation in AET courses was associated with a small but statistically significant increase in the probability of transition into employment, and there was also a positive relationship between AET course completion and an increase in earnings for participants who were already employed (Lima et al., 2012a).

Following the publication of the Lima evaluation the Social Democratic government moved to end the NOI. Silva et al. (2018) shows the magnitude of this de-investment. Between 2007 and 2011 the number of enrolments in the NOI ranged from 243,971 to 283,399. In 2012, enrolments decreased

4 It could also be conceptualized as mega-choreography, a stage production.

5 The System of Information and Management of the Educational and Training Provision (SIGO)

6 With the exception of participants with a higher level of education (secondary level) at the start of the process and in combination with modular training.

very significantly and, by 2013, had shrunk to just 28. NOI, which had been launched with the aim of affecting a “paradigm change” (Carneiro, 2011, p. 29) in adult education in Portugal, had effectively been closed down.

Carneiro’s Methodological Weaknesses

Perhaps the most obvious difference between the two evaluations is their methodological approach. Whereas Carneiro’s evaluation was primarily *emic*, i.e., focused on qualitative “insider stories” of stakeholders’ experiences and perceptions of NOI, coupled with self-report quantitative data collected from stakeholders, Lima’s evaluation was an *etic*, large-*N*, quantitative, quasi-experimental analysis of matched treatment and control groups. In discussing their methodology, Lima et al. (2012b) criticized Carneiro’s methods, suggesting that Carneiro had the relationship between perceptions and impacts backwards: rather than basing assessment of program impacts on stakeholders’ subjective perceptions (as Carneiro had done), Lima and colleagues argued that evaluations should be based on more objective measures of program impacts, and that these measures should then form the basis for the evaluator’s perceptions about the program.

In advancing this opinion, Lima et al. (2012b) did not criticize the credibility of Carneiro’s evidence (i.e., its believability or trustworthiness) but rather its methodological relevance. In Schwandt’s (2009) framework, methodological relevance refers to the validity of the evidence, i.e., the appropriateness of the evidence for the evaluative claims made on its behalf. In drawing on qualitative self-report evidence to assess program outcomes such as gains in literacy and “learning to learn” skills (see e.g., Valente, Carvalho, & Carvalho, 2011), the Carneiro evaluation produced evidence that, while highly relevant for understanding learner

experiences and perspectives, was markedly less relevant for measuring change over time due to program processes and activities. In doing so, the Carneiro evaluation opened itself to methodological criticisms of the sort advanced by Lima and colleagues.

Lima’s Theoretical Weaknesses

The OECD (2002) defines evaluation as “the systematic and objective assessment of an ongoing or completed project, program, or policy,” and suggests that evaluations “should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process” (p. 21).

Despite this characterization of evaluation as “objective assessment,” a great deal of subjective decision-making goes into evaluation design. Political actors, whether funders or evaluators themselves, may exercise a high degree of discretion in establishing the criteria for program assessment, and this discretion can play a central role in determining evaluation results (Pollitt, 2013). In Portugal, we see evidence of this discretion in action, via a shift in how the key policy problem underlying NOI was characterized and evaluated.

NOI sought to address the wicked problem of adult skills and qualifications, a problem that had arisen at least in part through generations of underinvestment in Portuguese education. Wicked problems such as adult skills and qualifications compel governments to rethink traditional approaches. Accordingly, NOI was highly ambitious in scope: the policy sought to radically reshape Portugal’s adult education system, and Portuguese adults’ attitude to that system (Carneiro, 2011). Such an ambitious set of objectives creates opportunities for evaluators, but also challenges.

NOI's program theory was predicated on the notion that increasing both the supply of and demand for adult skills and qualifications would have positive impacts on attitudes to and uptake of adult learning opportunities, which would in turn have positive long-term impacts on employment and earnings, amongst other outcomes. Carneiro's evaluation therefore focused primarily on issues of supply and demand, assessing public acceptance of the NOI brand and stakeholder perceptions of program quality. Despite its methodological weaknesses, the Carneiro evaluation did achieve a high level of theoretical credibility, in that the evaluation design closely matched (and sought to assess the effectiveness of) the program theory underpinning NOI. In contrast, the Lima evaluation had a much narrower focus, measuring only short-term program impacts on earnings and employment.

The discretionary, subjective decisions of evaluators and/or their funders shape evaluation processes and results, making evaluations less objective than they might otherwise appear. However, appearances play a central role in the relationship between politics and evaluation. The conceptualization of evaluation as an objective, strictly rational and technical tool allows evaluations to be used as "mechanism[s] to disguise the politics involved" in decision-making (Legorreta, 2015, p. 62). Evaluations serve a legitimizing function, allowing governments to symbolically demonstrate that their actions are driven by evidence rather than ideology (Legorreta, 2015), even when this is not the case. Thus in addition to playing an instrumental role in policy-making by providing credible and relevant evidence of program effectiveness, evaluations may play a symbolic role, allowing policymakers to wave "the flag of evaluation to claim a rational basis for action (or inaction), or to justify pre-existing positions" (Henry & Mark,

2003, p. 264). Evaluations provide a "cloak [or mask] of rationality" that decision-makers can use to cover or disguise ideological decisions (Legorreta, 2015, p. 62).

We suggest that Lima's focus only on earnings and employment outcomes – as important as these outcomes are – is an example of this symbolic function of evaluation. By conducting a methodologically rigorous evaluation, Lima provided decision-makers with a seemingly objective assessment of NOI, and this assessment provided the Social Democratic government with a mask of rationality that was used to justify ending the NOI, which was so closely associated with the previous Socialist Party government. Lima et al.'s high degree of methodological credibility and relevance (particularly in comparison to Carneiro's lower methodological relevance) masked the subjective, discretionary decision-making underpinning their evaluation design. Despite appearing methodologically "objective", the Lima evaluation was theoretically mis-specified, in that it was based not on NOI's underpinning program theory but on a more reductive theory focused solely on short-term earning and employment outcomes. By focusing only on these outcomes Lima evaluated a complex, broad-ranging, long-term program using a somewhat simplistic, linear evaluation design.

Wicked Problems Require Knowledge Cumulation

Such theoretically mis-specified evaluations are unfortunately common in adult basic skills: the field is littered with methodologically credible and relevant evaluations that, because they were theoretically mis-specified, were likely to produce null findings. In England, for example, two successive evaluations of the national adult literacy and numeracy program (Cook, Morris, Cara,

Carpentieri, & Creese, 2013; Panayiotou, Hingley, & Boulden, 2018) were predicated on the notion that the program's dose of literacy instruction would directly increase adults' literacy skills, and that this increase would be sufficiently large and rapid to be measurable when comparing pre- and post-tests. In both evaluations, this proved untrue. In the United States, several randomized controlled trials (e.g., Miller, Esposito, & McCardle, 2011) have been predicated on the same dose-response design and have reached similarly negative conclusions. Through his Practice Engagement Theory, Reder (1994, 2009b) has provided a more realistic hypothesis, suggesting that whereas adult basic skills programs are unlikely to produce measurable short-term impacts on literacy and numeracy skills, they do lead to measurable increases in literacy and numeracy practices; these practice gains, in turn, serve as mechanisms that contribute, over a sufficient amount of time, to improvements in literacy and numeracy skills.

In focusing on the role of practices as a mechanism for skills gain, Reder implicitly addresses one of the key weaknesses of many program evaluations in wicked fields: their over-emphasis on a small range of politically high profile short-term outcomes, and their lack of attention to how, why, in what context, for whom, and over what time period those outcomes may be achieved and sustained (Pawson, 2013; Pawson & Tilley, 2004). Though they may be methodologically credible and relevant, such evaluations are theoretically limited because they do not delve into the program's "black box" – i.e., they do not provide sufficient evidence of the causal mechanisms through which programs achieve impact (Stame, 2004). Nor do they provide sufficient information for program designers seeking to improve the theories on which future

programs can be based. Policymakers, rightly and urgently "moved by the need to tackle serious social problems" such as adult skills, focus only on program outcomes and impacts, and "gloss over what is expected to happen [in the program], the how and why" (Stame, 2004, p. 58). In such cases, evaluations lack theoretical relevance, i.e., they do not help us understand how desired outcomes are most likely to be achieved. This theoretical relevance is essential to policy development in wicked fields.

In Portugal, neither set of NOI evaluations generated sufficient evidence of how NOI might achieve its aims, through what mechanisms, in what contexts, and over what length of time. The Lima evaluation, for example, investigated economic and employment outcomes, but was much less interested in the mechanisms through which they might be achieved. This is in contrast to a quasi-experimental study of the economic impacts of England's Skills for Life Adult Literacy and Numeracy Strategy (Metcalf & Meadows, 2009) which, in addition to collecting evidence on employment and earning outcomes, collected evidence on mechanisms supporting employability such as self-esteem and motivation to participate in training and education. Metcalf and Meadows (2009) argued that these mechanisms may, over time, facilitate the economic outcomes of interest. Lima appears to have been un-interested in such processes.

This lack of contribution to broader program theory is in some ways more notable in the Carneiro evaluation – precisely because this was a more theoretically ambitious evaluation than Lima's. Carneiro considered a broad range of outcomes, including changes in literacy practices, but did not engage in sufficient consideration of how these outcomes may interact in causal chains over time to produce NOI's desired goals.

Even while seeking to evaluate a “paradigm shift in policy,” Carneiro adopted a traditional evaluation approach focused on program outcomes and impacts, with insufficient attention to the conceptualization and operationalization of program mechanisms. This evaluation was meant to be developmental, not just summative – as such, it should have made meaningful contributions to program theory. It failed to do this, in large part because of a lack of focus on mechanisms. As with Lima’s evaluation (2012a, 2012b), the black box of NOI was not opened and explored.

The relevance of the two evaluations thus goes only as far as the program (NOI) being assessed and does not extend to the field as a whole. Such an approach may be both efficient and sufficient in policy fields where program theory is well developed, i.e., areas in which stakeholders can turn to well-evidenced theories of how to achieve their policy aims. Adult skills are not such a field.

Conclusion

In this article, we have used the NOI evaluations as a case study of methodological and theoretical credibility and relevance in evaluations of interventions in wicked policy areas. Our analysis illustrates strengths and weaknesses in both sets of evaluations, both at the level of evidence use and evaluation design. With regard to the credibility and relevance of the evidence used in the two sets of evaluations, Carneiro’s largely *emic* evidence was relevant for claims about stakeholder perceptions but was insufficient for assessment of program impacts on earnings and employment. In these areas, Lima’s evidence was more relevant. However, with regard to the theoretical credibility of the two sets of evaluations, we suggest that Lima’s methodological rigor masks a reductive, theoretically mis-specified evaluation approach

which was inappropriate to NOI’s program theory. This aspect of our analysis highlights the central role that the “hidden politics” of evaluation design may play in shaping evaluation design (Legoretta, 2015).

In this analysis, we have highlighted the parallels with evaluations of adult basic skills interventions. Lima’s methodologically rigorous but theoretically mis-specified evaluation is reminiscent of a number of major adult literacy and numeracy evaluations, in terms of the evaluation design’s misalignment with program theory. Analogous to the notion of the “mask of rationality” through which evaluations legitimize ideological decision-making, there is a “mask of credibility” through which evaluators and evaluation funders convince themselves that methodological credibility and relevance is sufficient. It is not. Methodological rigor is necessary but is not by itself sufficient as an evaluation design based on an unrealistic or unsupported program theory is an exercise in futility and does not contribute sufficiently to knowledge cumulation. As we have argued, evaluations in wicked policy fields need to go beyond merely assessing the intervention at hand; they need to actively contribute to program theory in the field as a whole (Pawson & Tilley, 2001). Collective commitment to knowledge cumulation is essential for overcoming wicked policy problems: intervention studies in wicked policy areas need to keep some focus on the forest, not just their individual tree.

In basic skills, one of the few studies to attempt to do this is the Longitudinal Study of Adult Learning (LSAL) (Reder, 2009a). Using longitudinally repeated measures of literacy and numeracy skills and practices over a seven-year period (Strawn, Lopez, & Setzler, 2007), LSAL was able to test and support Practice Engagement Theory’s hypothesis that program-driven increases

in literacy and numeracy practices would lead, over time, to improved literacy and numeracy skills. One of the keys to LSAL's positive impacts is the long-term nature of the study: participants were tracked over seven years, allowing researchers time to focus on mechanisms, not just outcomes. Thus, LSAL was able to test and contribute to program theory in a way that neither NOI evaluation, nor evaluations such as those conducted by Cook et al. (2013) and Metcalf and Meadows (2009) did. Metcalf and Meadows (2009) have suggested that their own 3-year evaluation was unlikely to have covered a long enough period of time for employment and earnings effects to become evident. Notably, Reder (2014b) found that whereas adults with more than 100 hours of basic skills program participation did not show earnings gains (compared to non-participants) in the first 5 years of LSAL, after 9-10 years, participants showed large comparative gains.

Pawson and Tilley (2001) have argued that evaluation is: cursed with short-termism. Programs are dispatched to meet pressing dilemmas, evaluations are let on a piecemeal basis, methods are chosen to pragmatic ends, and findings lean

towards parochial concerns. Our hope, possibly against hope, is for a future evaluation culture that is more painstaking and for an evidence base that is more cumulative. (p. 322)

We share this hope and suggest that LSAL shows a possible way forward. To avoid repetitive and non-productive short-termism in adult skills evaluations, there is a need for long-term evaluations and a long-term approach to knowledge cumulation. Longer term longitudinal evaluations would give researchers an improved chance of developing a clearer understanding of the intermediary causal mechanisms that lead to policy relevant outcomes such as skills gains, better employment and increased earnings. Greater understanding of causal mechanisms (including the time required for such mechanisms to take effect) would allow for the development of more nuanced and robust program theories. This would in turn lay the groundwork for more sensible evaluation indicators and program targets. If improved adult skills are an investment worth making – and they certainly are – then so too is improved program evaluation. Without the latter, our progress towards the former will be far slower.

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PIAAC Numeracy Skills and Home Use Among Adult English Learners

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Abstract

Research on adult English learners (ELs) typically (and appropriately) focuses on language-related skills. However, adult ELs may need numeracy instruction to navigate daily life or understand health information. Little is known about how ELs use numeracy skills at home and connections of skill use with related electronic numeracy skills. The purpose of this paper is to examine numeracy skill levels and home skill use of adult ELs. Employing Programme for the International Assessment of Adult Competencies (PIAAC) 2012/2014 data, the paper begins with identifying adult ELs' numeracy skill levels. The relationship of skill level with skill use is then analyzed to determine how six discrete groups of ELs at various skill levels employ numeracy skills, and to describe characteristics and backgrounds of each group for adult education instructors and interested stakeholders. The paper concludes with recommended implications for instruction from Curry's (2017) instructional guide based on the PIAAC *Numeracy Framework*.

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Adult English learners (ELs) generally, and appropriately, wish to learn language-related skills. ELs, defined for this paper as immigrant adults with low English language skills in speaking, listening, reading, and/or writing, may seek to learn English to enhance their ability to communicate with, among others, neighbors, co-workers, child caretakers, and doctors in English. Additionally, adult ELs may want numeracy skills – practices in everyday life involving mathematics activities (Hogan et al., 2016) – to successfully navigate daily life, perhaps because they may have studied little or no numeracy initially in their

home country or because many years have gone by and skills are forgotten or outdated. Many are adults over 24 years who do not fit a traditional full-time, immediate post-high-school model of learning in the United States. They may wish to help their children with schoolwork, determine shopping costs, or learn other numeracy skills for a sense of accomplishment (Coben & Alkema, 2017; Ginsburg, 2017). As they age, adult ELs may also seek health information; numeracy skills are related to health-related outcomes and behaviors as well as health status (Organisation for Economic Co-operation and Development

[OECD], 2013; Yamashita, Bardo, & Liu, 2018; Yamashita & Kunkel, 2015).

Also, little is known about how adult ELs use numeracy skills in their home lives and how skill use connects with electronic numeracy skills, specifically using spreadsheets and conducting online financial transactions. This paper's purpose is to examine numeracy skills and skill use at home of adults ages 25 to 74 years, who are first-generation immigrants and experiencing challenges with English proficiency, to better understand the needs of potential ELs. As the United States "has increasingly become a quantitative, information and technologically heavy society" (Cummins, Yamashita, & Arbogast, 2018, p. 21) with the widest variability in numeracy skills of 24 OECD countries (Green, Green, & Pensiero, 2015) and nearly 3 in 10 scoring at or below level 1 in numeracy (Grotlüschen, Mallows, Reder, & Sabatini, 2016), investigating where numeracy skills of adult ELs place within that spectrum is important. A 2012/2014 Programme for the International Assessment of Adult Competencies (PIAAC) dataset permits largescale secondary analyses of numeracy skills and at-home numeracy use.

Beyond investigating numeracy needs of potential ELs and filling in knowledge gaps on their numeracy skills and skill use, this paper offers implications for practice. Since U.S. adult education programs are not universally designed with EL numeracy instruction in mind, ideas on program design and assessment may potentially increase numeracy skill levels and use along with language learning. Also relevant are instructional approaches to support strengthening EL numeracy skills.

Literature Review

Numeracy vs. Mathematics

To begin with, clearly distinguishing numeracy from mathematics is useful. PIAAC defines numeracy as "ability to access, use, interpret, and communicate mathematical information and ideas, in order to engage in and manage the mathematical demands of a range of situations in adult life" (PIAAC Numeracy Expert Group, 2009, p. 6; Rampey et al., 2016, p. 2). Ginsburg (2017) adds that numeracy skills and practices are more situated and less decontextualized and abstract than mathematics; instead they engage "with life's diverse contexts and situations" (p. 57-58). Numeracy skills are considered essential, as their absence can have negative psychological and social impacts, and numeracy skills in personal or community contexts tend to be more focused on meaning than numeracy skills in other contexts, such as the workplace (Saal, Gholson, Machtmes, & Machtmes, 2018).

Numeracy Skills of Immigrants and English Learners

Non-formal education may particularly benefit numeracy skills of immigrants (Krupar, Horvatek, & Byun, 2017). Having skills to process and communicate mathematical information is foundational to immigrants' full participation in society, argue Batalova and Fix (2015). Perry (2017) adds that numeracy "serves as indicator for the extent to which immigrants have achieved important prerequisites for social participation in the host country" (p. 19).

Many, though not all, immigrants are also potential ELs. How mathematics vocabulary, context, and symbols are employed in instruction are key issues that can challenge ELs as they gain numeracy skills in English (Ni Riordain, Coben, & Miller-Reilly, 2015; Stacey, 2016). ELs use multiple resources from experience (both in and outside the learning context) to gain numeracy. The

intricate relationship between gaining numeracy skills and language is further complicated when language of instruction changes (Ni Riordain et al., 2015). ELs frequently come from countries and cultures in which instruction and assessments, mathematical symbols and language, and even value placed on numeracy skills differ from those in the United States, and instructional staff may easily make inaccurate assumptions about what ELs recognize, understand, and can do (Sellers & Byrne, 2015; Stacey, 2016).

PIAAC Numeracy Studies of Immigrants and English Learners

How have PIAAC data been employed to date to contribute information on numeracy skills and at-home use among adult ELs? Multiple PIAAC studies have focused on immigrants to the United States, others on adults with low English proficiency. Neither immigrants nor ELs are homogeneous groups (Lind & Mellander, 2016; OECD, 2018); while ELs are primarily (though not exclusively) immigrants, first-generation immigrants to the United States may have variable levels of English proficiency, from none to native fluency. Low assessed numeracy skills may partly reflect a language penalty from being assessed in a non-native language (i.e., English in the United States) rather than actual numeracy skills (Green et al., 2015; OECD, 2018). Therefore, distinguishing immigration status from language proficiency needs to occur thoughtfully (Lind & Mellander, 2016). For this paper, adults selected were ages 25 to 74 years, first-generation immigrants, and experiencing challenges with English proficiency.

Initial PIAAC research indicates that immigrant adults tend to struggle with both literacy and numeracy compared with native-born adults (Batalova & Fix, 2015, 2016; Krupar et al., 2017;

Massing & Schneider, 2017; OECD, 2018). One in six U.S. adults are first-generation immigrants, compared with approximately 1 in 4 in Canada and 1 in 3 in Australia (Perry, 2017). Nearly a fourth (24%) of first-generation immigrants ages 25 to 34 in the United States have less than a high school education (Batalova & Fix, 2016).

Adults born outside the United States are overrepresented among adults with low numeracy skills (Grotlüschen et al., 2016). Half of immigrants (48%) in Batalova and Fix' (2015) PIAAC study have numeracy skills at level 1 (or below). Adults who self-report speaking, understanding, reading, or writing English “not well” or “not at all” have numeracy scores averaging below level 1. Even immigrants ages 25 to 65 with a college education outside the United States have average numeracy scores at level 2, significantly lower than their U.S.-educated immigrant peers (Batalova & Fix, 2015). To interpret what these levels mean, OECD sets a proficiency threshold starting at level 3; in contrast, level 1 numeracy tasks require simple one-step or two-step processes involving, for example, performing basic arithmetic operations, understanding simple percentages, or identifying and using elements of simple graphs (OECD, 2013; Rampey et al., 2016).

Adult Learners and Numeracy

Gaining essential numeracy skills in adulthood implies further learning. Reder (2009b, 2013) distinguishes two sources of learners: adult immigrants and, less frequently, older adults and notes “increasing need for programs that focus on skill retention among older adults” (Reder, 2013, p. 21). Life-wide learning indicates gaining numeracy skills that can be applied at home or in educational or community settings (Massing & Schneider, 2017; Reder, 2013). Examples of

numeracy tasks at home include daily activities like balancing a checkbook, calculating interest, or measuring for recipes (Smith, 2009).

Age, Education Attainment, and Family Background in PIAAC Findings

PIAAC findings point to other factors of importance in analyses of numeracy skills among adult ELs: age, education attainment, and family background. Rates of aging in OECD countries, including United States, are steadily increasing as fertility rates decline and life expectancy increases (Paccagnella, 2016). Scandurra and Calero (2017) make the important point that younger cohorts of adults tend to have lengthier exposure to education than older cohorts; therefore, older adults may have lower skills in part due to less access to education.

Additionally, adult ELs may be disadvantaged because of less time in the host country, social environment, and family background as well as language differences (Massing & Schneider, 2017; Scandurra & Calero, 2017). In a causal path model of 30 OECD countries, Jonas (2018) reports high coefficients for years of education contributing to numeracy proficiency (0.48); greater education attainment does not entirely explain skill differences, however (Jonas, 2018; Massing & Schneider, 2017; OECD, 2018; Reder, 2009a). In Scandurra and Calero's (2017) path modelling of PIAAC data, family background makes the strongest contribution to education (0.78).

Practice Engagement: Numeracy Skills and At-home Use

Multiple researchers discuss the relationship of skill acquisition (or loss) with skill use (Jonas, 2018; Scandurra & Calero, 2017; Stoeren, Lundtrae, & Boring, 2018). Two path models note factors contributing to at-home numeracy use:

Jonas (2018) reports that numeracy proficiency tends to benefit numeracy practices (0.28) and Scandurra and Calero (2017) report education attainment contributes moderately to skill use at home (0.56). Stoeren et al. (2018) claim, "The 'use-it or lose-it'-hypothesis" assumes adult skills will diminish if not used (p. 579). A reciprocal relationship also exists between education attainment and skills, such that "education increases one's skills, and skilled persons normally have more education" (Stoeren et al., 2018, p. 593). Skill use may contribute to maintaining or promoting basic skills or even reduce skill loss with increasing age (Stoeren et al., 2018).

In the United States, high *use* of numeracy skills co-exists with low numeracy skills. Internationally, 1 in 5 adults with numeracy skill levels at level 1 or below reports never using numeracy skills at home; U.S. adult use of numeracy skills at home is generally high and tends to increase as skill levels rise (Grotlüschen et al., 2016). U.S. numeracy skill *use* is estimated at the 65th percentile, second only to Finland, yet score means in assessed numeracy *skills* are below average (Jonas, 2018). With increasing age, at-home numeracy skill use tends to decline (Grotlüschen et al., 2016).

Recent PIAAC studies (Cummins et al., 2018; Saal et al., 2018; Scandurra & Calero, 2017) apply practice engagement theory, which holds that adults' practices, or engagement in numeracy or literacy events in daily life, impact adults' proficiencies (Reder, 2009a, 2009b; Saal et al., 2018). This theory has salient implications for accountability of adult education programs – and for their impact. "Adult education programs are more closely aligned with practice engagement measures than with proficiency measures. Program participation leads to increased practice engagement that, over time, leads to" gains in

learning (Reder, 2009a, p. 35). Holding programs accountable for valid and reliable growth in engagement in numeracy practices “would be a more effective way to assess program impact” (Reder, 2009b, p. 80). Coben and Alkema (2017) add that when increases in numeracy practices are not reflected in increased gains in learning, learners and instructors can feel frustrated.

Numeracy Skills and Health

A final factor of importance, though sparsely investigated in PIAAC for adult ELs, is health (Jonas, 2018; Prins & Monnat, 2015), particularly for middle-aged and older adults (Cummins et al., 2018). Researchers note that middle-aged and older adults face higher risks of health-related problems (Jonas, 2018; Yamashita, Bardo, & Liu, 2018). Numeracy skills, and even more so numeracy skill use, appear to predict health-related outcomes and behaviors than do literacy skills (Jonas, 2018).

Having strong skills in numeracy permits adults to understand health risks, make informed health decisions, and manage health conditions (Cummins et al., 2018; Feinberg, Greenberg, & Frijters, 2015; Jonas, 2018; Prins & Monnat, 2015; Yamashita et al., 2018). Prins and Monnat (2015) note, “despite immigrants’ low literacy and numeracy scores and disadvantaged socioeconomic position relative to their U.S.-born peers, they generally reported better health” (p. 18). “Better understanding of numeracy skills” in relation to health “will be a logical next step” (Cummins et al., 2018, p. 21).

Research Questions

This paper’s purpose, as stated in the introduction, is to examine numeracy skills and skill use at home of adult ELs. Numerous PIAAC studies have reviewed U.S. numeracy data from 2012; however,

few studies analyze the latest U.S. data (i.e., 2012/2014) or PIAAC data on older adults, and none specifically investigates numeracy skills and at-home use of adult ELs. To begin to fill this gap, three research questions have been developed:

1. What are average numeracy skill levels and numeracy at-home use rates of adult English learners (ELs) in the aggregate?
2. Controlling for education attainment, family background, and health, how does numeracy at-home use of adult ELs predict numeracy skill levels?
3. How does numeracy at-home use of adult ELs differ among discrete groups based on covariates (from Research Question [RQ] 2) and numeracy skill levels? What are descriptive characteristics of each group?

Methods

Sample

PIAAC:2012 surveyed and assessed 5,010 U.S. adults ages 16 to 65 years. Supplemental data from 2014 extend the U.S. sample to 8,670 adults and include key subgroups: unemployed adults (ages 16 to 65), young adults (ages 16 to 34), and older adults (ages 66 to 74).

PIAAC:2012/2014 data collection employed a complex sampling design to ensure representativeness in the population (Hogan et al., 2016). PIAAC:2012/2014 data files are assembled from public-use files that perturb and categorize individual data to ensure confidentiality. Weights are applied to ensure that respondents in the sample represent an accurate population proportion and that standard errors reflect variability estimated in the population rather than in the sample. Replicate weights facilitate

calculating unbiased estimates and standard errors. More detail on sampling, weighting, background questionnaire administration, and assessments is available in Hogan et al. (2016).

The full sample from PIAAC:2012/2014 was limited for this paper to 494 U.S. adults ages 25 to 74 years experiencing challenges with English proficiency, and who are first-generation immigrants. English proficiency was determined from a score comprised of a summed measure of four U.S.-specific variables indicating respondents' self-reported ability to speak, read, write, and understand spoken English (J_Q05cUSX3a, 3b, 3c, and 3d), where higher composite scores represent less proficiency (Prins & Monnat, 2015). Adults with English proficiency scores of 6 through 16 were included (i.e., summed scores in which respondents rated at least one measure "well," "not well," or "not at all"). This final sample of 494 represents approximately 16 million U.S. adults.

Variables for Numeracy Skills and At-Home Use

Selected adults took surveys and assessments on laptop computers. They completed an extensive background questionnaire and assessments in literacy, numeracy, and problem-solving in technology-rich environments. The background questionnaire (BQ) contains 10 sections of items measuring general information, education background, employment, skill use, personal characteristics, health, and family background. Analyses in this paper rely on multiple BQ items. Adult ELs completed the BQ in English (62.3%) or in Spanish (37.7%).

PIAAC "offers a measure of *proficiency level*, based on a standardised numeracy assessment, and a measure of intensity of adults' *use of numeracy*, based on self-reported questions about" participants' "use of numeracy-related skills and/or reasoning" (Jonas, 2018, p. 10). Assessment

scores are estimated using 10 plausible values per content domain. Scores range from 0 to 500 and are classified into one of five levels. Numeracy levels are: below Level 1 (0-175), Level 1 (176-225), Level 2 (226-275), Level 3 (276-325), and Levels 4 / 5 (326-500), according to Rampey et al. (2016). All 494 ELs completed the numeracy assessment in English.

PIAAC BQ also collects information on how often adults engage in numeracy-related activities at home. Responses range from "never" to "every day". PIAAC respondents are asked about six numeracy activities, two reading activities that "involve accessing numerical and mathematical information and representations that have a mathematical dimension" (Jonas, 2018, p. 13), and two technology activities involving calculations or financial knowledge. The 10 at-home use items with numeracy components are shown in Table 1.

Control and Descriptive Variables

Three covariates are employed for analyses in Research Question 2 (RQ2). These covariates include educational attainment, parental education, and self-reported health status. Respondents' educational attainment is measured in three categories: less than high school (LHS), high school (HS), and postsecondary (PSE) levels (Krupar et al., 2017). Parent's highest education level is the higher of either mother's or father's education attainment, dummy coded (0) to less than high school (LHS) or high school or college degree (1); 26 adults did not know their parents' education attainment so are missing these data. Self-reported health status is coded to excellent, very good, or good (0), contrasted with fair or poor health (1).

Descriptive variables include age, gender, income, family characteristics, and health-related variables. Respondents' ages are grouped into 10 categories of 5-year age bands: 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-65, 66-70, and 71-74 years. Gender

Table 1: Items for At-Home Use of Numeracy Skills

ITEM	WORDING: IN EVERYDAY LIFE, HOW OFTEN DO YOU USUALLY...
H_Q01g	Read bills, invoices, bank statements or other financial statements?
H_Q01h	Read diagrams, maps, or schematics?
H_Q03b	Calculate prices, costs or budgets?
H_Q03c	Use or calculate fractions, decimals or percentages?
H_Q03d	Use a calculator - either hand-held or computer based?
H_Q03f	Prepare charts, graphs or tables?
H_Q03g	Use simple algebra or formulas? *
H_Q03h	Use more advanced math or statistics such as calculus, complex algebra, trigonometry, or use of regression techniques?
H_Q05d†	Conduct transactions on the internet, for example buying or selling products or services, or banking?
H_Q05e†	Use spreadsheet software, for example Excel?

Notes: Frequency of responses includes never, less than once a month, less than once a week but at least once a month, at least once a week but not every day, every day. *According to PIAAC BQ, as cited in Curry (2017, p. 4), “By simple algebra or formula, we mean a mathematical rule that enables us to find an unknown number or quantity, for example a rule for finding an area when knowing length and width, or for working out how much more time is needed to travel a certain distance if speed is reduced.”

† Both technology variables (H_Q05d and e) contained substantial missing data ($n = 224$ and 225 , respectively) because many adults had reported earlier not ever using a computer so were legitimately not asked the question. For RQ2 regression analyses, these variables were recoded, with “not asked” becoming “never”, to maximize the sample for regression analyses.

is dichotomized as male and female. Respondents' monthly income is measured by a derived ordinal rank variable (EARNMTHALLDCL) with 10 deciles. Work status (C_Q07) indicates full- and part-time employment, as well as rates for those primarily in the home or on permanent disability. Family characteristics are measured by two dichotomous variables: living with spouse/partner or not and having a child(ren) or not. Additional health-related variables that could relate to numeracy skills and at-home use are having vision difficulties or hearing difficulties (versus not having the difficulty, respectively).

Analyses

RQ1 analyses were conducted in the aggregate using International Data Base (IDB) Analyzer

4 and SPSS 24, employing measures of central tendency for all 494 adult ELs. Means, standard errors (*SE*), and standard deviations (*SD*) are calculated for numeracy skills, with Cohen's *d* as effect size representing magnitude of mean differences from overall population score means. For five numeracy skill use categories, medians are reported. Sample and replicate weights are applied in all analyses. All analyses in this paper were descriptive, and causality should not be inferred.

Plausible values were calculated for estimates of scores in numeracy in RQ1 and for regression analyses in RQ2. In the first regression model for RQ2, numeracy scores were regressed on educational attainment, parental education, and self-reported health status. A second model

added in three composites of summed at-home numeracy skill use variables: 1) use of basic or advanced math skills (summed H_Q03c, d, g, and h), 2) use of numeracy skills for organization (summed H_Q01h, H_Q03f, and H_Q05e), and 3) use of financial numeracy skills (summed H_Q01g, H_Q03b, and H_Q05d). Possible composite values ranged from 3 (i.e., “never” on all uses) to 20 (i.e., “daily” on most uses) for basic and advanced math use, 3 to 14 for use of numeracy for organization, and 3 to 15 for use of financial numeracy skills. For RQ2 regression analyses, H_Q05d and H_Q05e were recoded, with “not asked” becoming “never” to maximize the sample for regression analyses.

In addressing RQ3, six discrete groups ($n = 401$) are identified from PIAAC data, based on EL education, parent education, and health status. Groups are named for education attainment (low, mid, or high) and prominent generation (Millennial, Gen X, or Baby Boomer). Each group is analyzed categorically for its use of specific numeracy skills and descriptively as explained earlier. Skill-use patterns in the three composites are also analyzed categorically for the six groups.

Results

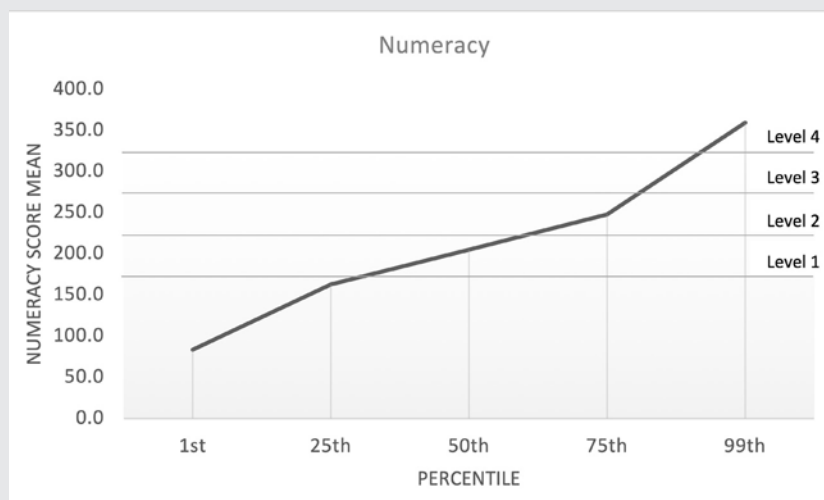
Research Question 1

The mean numeracy skill score for adult ELs is 207.8 ($SE = 4.5$, $SD = 61.7$), or an average Level 1 for numeracy skills. As displayed in Figure 1, numeracy percentiles range from a mean score of 83.6 (Below Level 1) in the first percentile to 359.5 (Level 4/5) in the 99th percentile. ELs taking the Spanish BQ have a significantly lower mean score

(172.2, $SE = 3.2$, $SD = 49.1$) than those taking the English BQ (229.3, $SE = 3.2$, $SD = 58.4$). The difference between the numeracy score means of ELs taking the English or the Spanish BQ ($d = 1.06$) is large, in favor of adult ELs taking the English BQ. For reference, the estimated mean numeracy score for the overall PIAAC 2012/2014 population was 257 ($SE = 1.1$, $SD = 54.4$), or Level 2, in Saal et al. (2018, p. 14). The difference between the score means of ELs (irrespective of BQ language) and the general population ($d = -0.85$) is also large, to the disadvantage of adult ELs.

In the aggregate, adult ELs indicate at-home use of financial numeracy skills most often. As shown in Figure 2, medians for financial statement review, conducting online transactions, and calculating costs or budgets were at least monthly. An estimated 45.3% of adult ELs review financial statements weekly or daily, 37.7% conduct online transactions weekly or daily, and 48.9% calculate costs or budgets weekly or daily. A fourth (or less) of adult ELs report never reading financial statements, conducting transactions online, or calculating costs or budgets.

Figure 1. Percentile distribution of mean numeracy scores of adult ELs



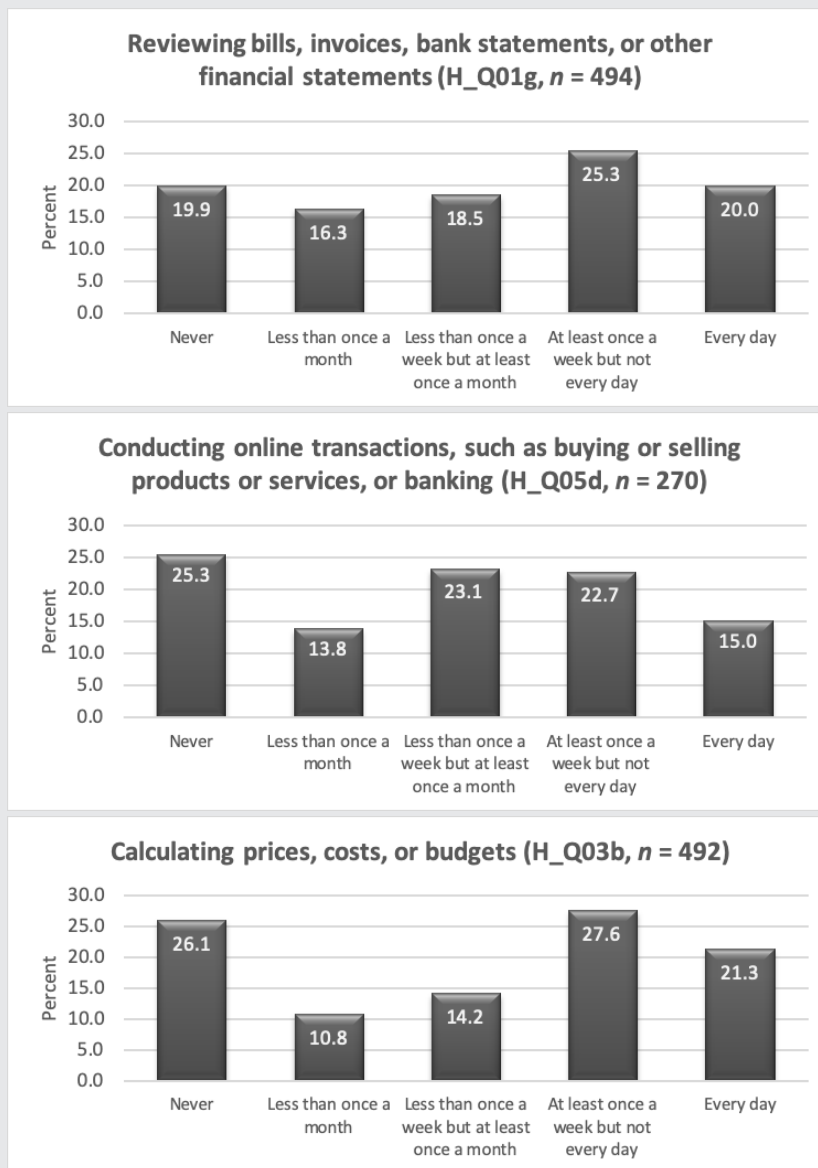
(Source: PIAAC 2012/2014)

Adult ELs report infrequently using basic math skills at home, and the majority report never using advanced math skills in daily life. Less than monthly was the median for calculating fractions or percentages and for using a calculator; nearly half (48.5%, *SE* 2.5) report never calculating fractions or percentages at home, and 35.8% (*SE* 2.5) never using a calculator. More than three-fourths of adult ELs (77.5%, *SE* 2.2) report never

using simple algebra or formulae, and 90.4% (*SE* 1.7) indicate never using advanced math or statistics at home.

In daily life, most adult ELs indicate never employing numeracy skills to organize information. The median was “never” for reading diagrams, maps, and schematics (61.4%, *SE* 2.8), for using spreadsheets on a computer (68.9%, *SE* 3.8), and for preparing charts, graphs, or tables (83.8%, *SE* 1.5).

Figure 2. Frequency distribution of financial numeracy skills of adult ELs



(Source: PIAAC 2012/2014)

Research Question 2

Education attainment, family background, and health, as explained in the literature review, are important predictors of numeracy skills, though generally difficult to change. According to the first regression model, which explains 30% of variance in numeracy scores (*Nagelkerke* R^2 0.30), an adult EL with LHS education, parents with LHS education, and good health could expect a mean numeracy score of 205 (Level 1). If this same adult had fair or poor health, the score would decrease to 177, yet still be in Level 1. If the adult and his or her parent had a postsecondary degree and the adult had good health, the mean numeracy score would increase to 265 (Level 2) – with fair or poor health, the score would decrease to 237 but remain in Level 2.

With three at-home numeracy skill use composites added (i.e., use of basic or advanced math skills, use of numeracy skills for organization, and use of financial numeracy skills), the percentage of variance explained in the second model increased to 40% (*Nagelkerke R² 0.40*). In this model, an adult EL with LHS education, parents with LHS education, good health, and an answer of “never” on the three numeracy skill use composites could expect a mean numeracy score of 182 (Level 1). Figure 3 displays the predicted mean scores for categories of education, parent education, health and skill use.

Considering education, parental education, and health, an EL’s mean score would be predicted to increase by one point for every increment of use of basic or advanced math skills, by two points for every increment of use of numeracy skills for organization, and by three points for every

increment of use of financial numeracy skills. The final regression equation was:

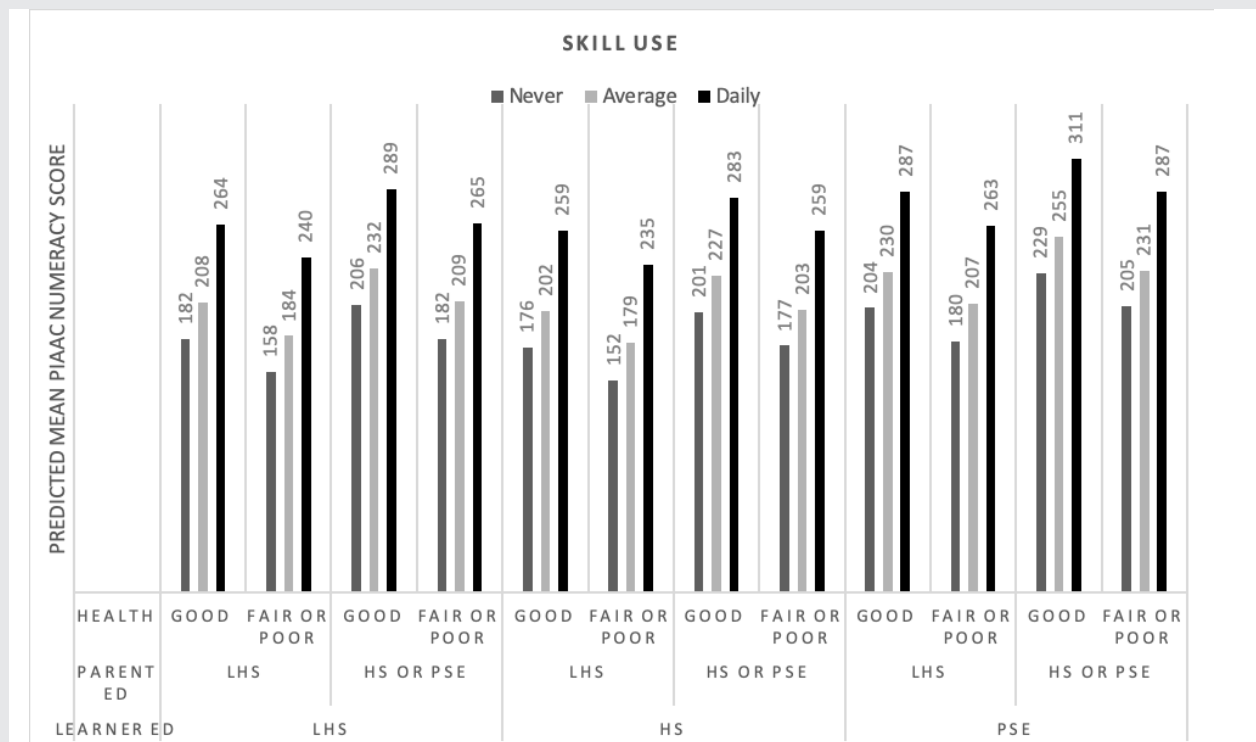
$$162 \text{ (starting score)} + 22.5 \text{ (EL has PSE education)} - 5.6 \text{ (EL has HS education)} + 24.4 \text{ (parent has HS or PSE education)} - 23.8 \text{ (EL has fair or poor health)} + 1.1 \text{ (basic or advanced math skill use)} + 2.3 \text{ (numeracy skill use for organization)} + 3.2 \text{ (financial numeracy skill use)}$$

If this same EL reported “daily” use of all three numeracy skills composites, as shown in Figure 3, his or her predicted mean numeracy score would increase to 264 (Level 2).

As another example, if an adult EL and his or her parent has a high school education, the EL has good health, and the EL reports “daily” use of all three types of at-home numeracy skills, the mean numeracy score would be predicted as 283 (Level 3). Should this same EL report “never” using any of the three types of at-home numeracy skills, the

Figure 3. Predicted PIAAC Numeracy scores by skill use group of adult ELs

(Source: PIAAC 2012/2014)



Notes: LHS designates less than high school, HS high school, and PSE postsecondary education.

predicted mean numeracy score would decrease to 201 (Level 1). Use of numeracy skills therefore can predict substantial variation in PIAAC numeracy scores beyond that predicted by an EL's education attainment, health, and parental education.

Research Question 3

As shown in Figure 3, numerous groups are identifiable in PIAAC data, based on EL education, parent education, health status, and numeracy skill use pattern. After further review of group size by EL education, parent education, and health status, six discrete groups remain for further analysis. Adult educators may “recognize” adult ELs in these discrete groups through their characteristics; groups were named by education attainment and prominent generation. Characteristics are displayed in Table 2 and median numeracy scores in Figure 4.

The Low Millennial group (1) tends to comprise

millennial ELs with low personal and parental education attainment. As displayed in Figure 4, their median PIAAC Numeracy score is 177.6 (*SE* 10.6). The Low Baby Boomer group (2) tends to be older ELs reporting low personal and parental education attainment and fair or poor health. Twelve percent are on permanent disability, and 34% report difficulty seeing and 16% difficulty hearing. Most of the Low Millennial and Low Baby Boomer groups are partnered, and nearly all have children.

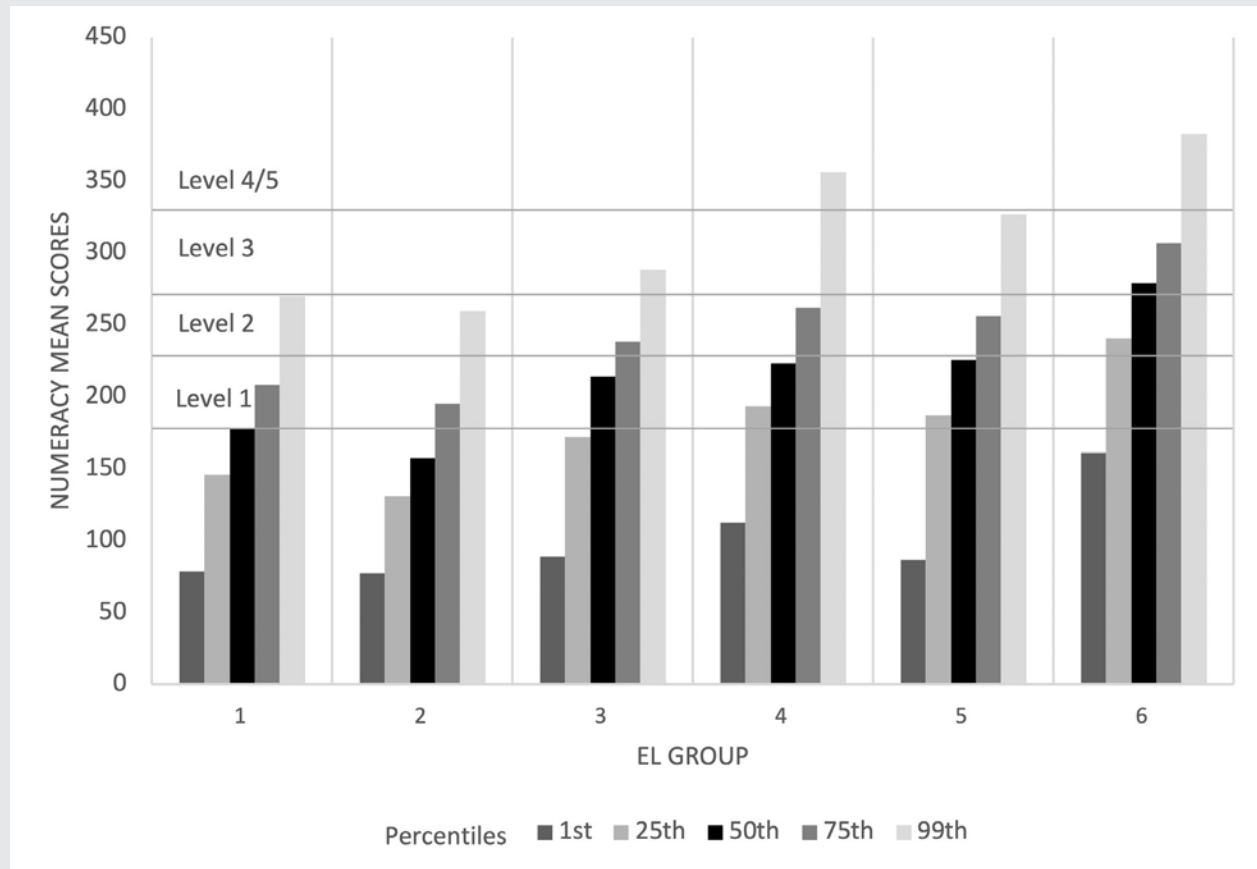
Members of the Mid Millennial group (3) report finishing high school, although their parents did not. This group tends to have high levels of full-time employment yet generally earns an income at approximately 200% of poverty. The Mid Young Millennial (4) group tends to be the youngest group and is mostly male; these ELs and their parents completed high school, and their parents may have completed PSE. Most of both Mid

Table 2: Characteristics of six groups of adult ELs (Source: PIAAC 2012/2014)

GROUP	LOW MILLENNIAL	LOW BABY BOOMER	MID MILLENNIAL	MID YOUNG MILLENNIAL	HIGH GEN X	HIGH YOUNG GEN X
Age (Mode in Years)	35-39	55-59	35-39	25-29	50-54	40-44
EL Education	LHS	LHS	HS	HS	PSE	PSE
Parent Education	LHS	LHS	LHS	HS/PSE	LHS	HS/PSE
Health Status	Good	Fair or Poor	Good	Good	Good	Good
Female (%)	56	63	59	39	63	60
Income (Decile)*	8 th	8 th	6 th	6 th	5 th	5 th
Employed FT (%)	64	57	60	51	50	52
Partner (% Yes)	82	74	74	84	78	80
Children (% Yes)	91	96	83	82	89	72
Difficulty Seeing (%)	24	34	11	5	28	9
Difficulty Hearing (%)	4	16	2	1	5	6
Permanent Disability (%)	0	12	0	0	7	0

Notes: *Higher deciles represent lower incomes; 200% of poverty level is estimated between 5th and 6th deciles. LHS designates less than high school, HS high school, and PSE postsecondary education.

Figure 4. Percentile distribution of mean numeracy scores of adult ELs in 6 groups



(Source: PIAAC 2012/2014)

Millennial groups are partnered, have children, and report positive health.

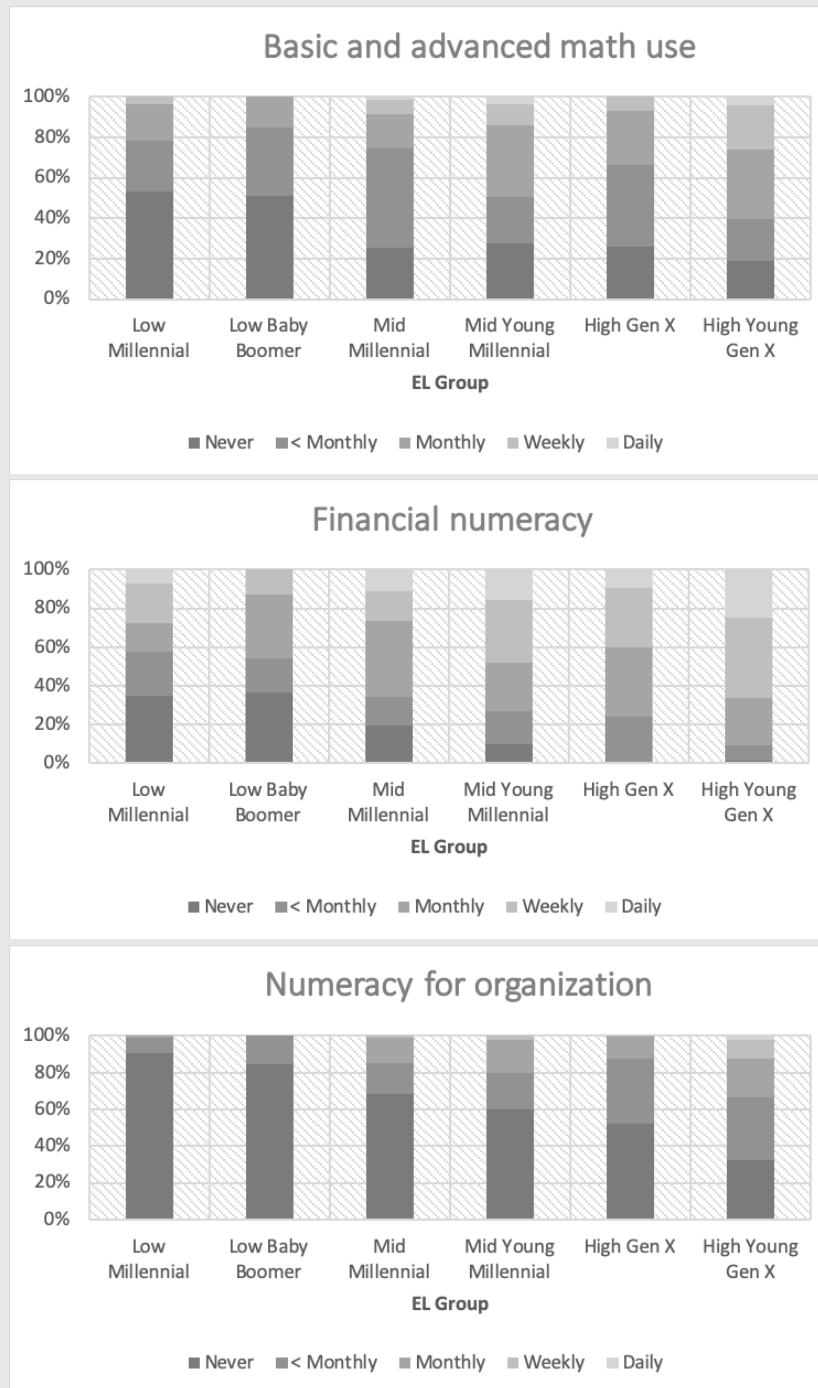
High Gen X (5) and High Young Gen X (6) groups completed PSE, but their parents' education varied. Most are women, and about half work full time, with incomes just above 200% of poverty. Most of High Gen X and High Young Gen X report positive health and are partnered with children.

Adult educators can also benefit from knowing specific numeracy skill use of adult ELs in discrete groups – both to understand the potential strengths in numeracy skills they already have and to identify numeracy skills in which they could receive instruction. As displayed in Figure 5, patterns of at-home numeracy skill use differ by

group. Low Millennials and Low Baby Boomers report a median “never” using basic or advanced math skills, and Mid Millennials, Mid Young Millennials, and High Gen X use them less than monthly, on average. Only the High Young Gen X group indicates a median monthly use of basic and advanced math skills at home.

Low Millennials and Low Baby Boomers report using financial numeracy skills less than monthly, on average. Mid Millennials, Mid Young Millennials, and High Gen X indicate using financial numeracy skills a median of monthly, and the High Young Gen X group doing so weekly. On using numeracy skills for organization, all groups except the High Young Gen X group report a median “never” using numeracy skills for

Figure 5. At-home numeracy skill use frequency by EL group



(Source: PIAAC 2012/2014)

organization. Only the High Young Gen X group uses them a median of less than monthly (see Figure 5).

Discussion

Summary of Findings

Findings are briefly summarized to allow the reader to review overall results before a discussion of implications. Aggregate EL findings include a mean numeracy score of nearly 208 (Level 1), much lower than 257 (Level 2) in the overall population (Saal et al., 2018). Adult ELs tend to use financial numeracy skills most often, including reviewing financial statements, conducting online transactions, and calculating costs or budgets. The majority report using basic math less than monthly and never using advanced math or numeracy to organize information. Use of three types of numeracy skills at home, on top of factors of EL education, health, and parental education, account for 40% of the variance in numeracy skills, with use of financial numeracy skills the strongest predictor of the three types.

Six discrete groups of adult ELs are identified and described, with groups varying widely in education background, age, income, and health-related characteristics. All six groups could potentially be among the adult education target

population. Group median scores in numeracy skills range from 157 (below Level 1) to 279 (Level 3). Most members of Low Millennial, Low Baby

Boomer, and Mid Millennial groups score at Level 1 or below in numeracy, and most of High Gen X and High Young Gen X score at Level 2 or below. Numeracy score levels of adults at levels 5 and 6 are similar to those found in Batalova & Fix (2015). These scores indicate ample opportunity for numeracy instruction in adult education. All groups, and particularly Low Millennial and Low Baby Boomer groups, could benefit from instruction in use of basic and advanced math and use of numeracy for organizing information. Low Millennial and Low Baby Boomer especially could find instruction in financial numeracy skills beneficial.

Implications for Practice Engagement and Health

According to this paper's findings, the U.S. general population discrepancy between high *use* of numeracy skills and relatively low numeracy skills (Grotlüschen et al., 2016; Jonas, 2018) was not replicated for adult ELs; except for financial numeracy, adult ELs seldom use numeracy skills at home. Instead, practice engagement theory (Reder, 2009a, 2009b; Saal et al., 2018) is supported in the relationship of low numeracy use with low numeracy skill levels in the first five groups, and high use with high skill levels in the High Young Gen X group only.

This paper also contributes to the sparsely investigated relationship of adult EL numeracy skills with health (Grotlüschen et al., 2016; Jonas, 2018; Prins & Monnat, 2015; Cummins et al., 2018). The Low Baby Boomer group, which had high proportions of middle-aged and older ELs, reports high rates of health-related problems – fair or poor health and vision and hearing difficulties (Jonas, 2018; Yamashita, Bardo, & Liu, 2018). This group also has low rates of numeracy skill use at home and the lowest median scores in numeracy of all groups. The High Gen X group, which also

has high proportions of adults in their 50's, has median scores similar to Mid Millennial and Mid Young Millennial groups, and similar rates in vision difficulties as Low Baby Boomers. While these relationships are not causal, they do indicate that adult educators working with adult ELs should be on the watch for health issues, including vision and hearing, that can impact learning and numeracy skill attainment and use.

Implications for Instruction

The summary of findings indicates that expanding numeracy skill use in basic and advanced math, numeracy for organizing information, and financial numeracy has the potential to benefit numeracy skills of adult ELs. Why is this instruction to enhance numeracy skill use important? One response is it strengthens immigrants ELs' full participation in society (Batalova & Fix, 2015; Perry, 2017). More personally, it can improve daily life. Curry (2017) answers, "From the minute we wake up we make multiple decisions each day based on numeracy skills" (p. 1). She continues, "Considering the importance of numeracy in our daily lives, it would seem that adults should be fairly proficient at numeracy-related tasks. However, [according to PIAAC findings] that does not appear to be the case."

To support instructional approaches to strengthening numeracy skills, Curry (2017) recommends the *PIAAC Numeracy* framework (PIAAC Numeracy Expert Group, 2009), which offers guiding "concepts to develop approaches to teaching numeracy" (p. 2). Employing these approaches will ensure "students have the skills they need to use numeracy to carry out important tasks in their daily lives" (Curry, 2017, p. 3). While not specific to ELs, Curry's guide offers adult education instructors approaches to help them think through numeracy instruction and

adapt it to EL needs. While adapting approaches, EL instructors need to recall challenges of mathematics vocabulary, context, and symbols (Ni Riordain et al., 2015) with potential to confuse adult ELs and think through assumptions about what they recognize, understand, and can do (Sellers & Byrne, 2015; Stacey, 2016).

Curry (2017) recommends asking questions about adult numeracy skills use (see Table 1), “to determine the types of numerate behaviors they already engage in” (p. 4). Instructors might also begin discussions on how adult ELs employ numeracy skills, perhaps during program orientation or in introducing numeracy lessons within English instruction. Curry (2017) suggests “students could interview each other about where they use math in their lives or how they addressed a situation where math was needed” (p. 4).

Numerate behavior is behavior that “involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways” (Curry, 2017, pp. 5-6). The situation and the context matter in numerate behavior (Ginsburg, 2017), and at-home numeracy skills are focused on meaning (Saal et al., 2018). Curry emphasizes *managing the situation* or *solving the problem*. To do so, adults need to use math and apply current knowledge of math concepts and skills. Curry (2017) examines contexts, responses, content, and representations of mathematical ideas – and instructional implications (pp. 7-10). She offers instructional planning examples (pp. 11-23), including resolving a childcare issue through budgeting (intermediate-level instruction), cost comparisons (low-level instruction), or algebraic reasoning (advanced-level instruction). She adds contextual and complexity factors via examples on calculating costs for a community fair, travel times, dietary needs, and sale discounts (pp. 25-28).

Curry concludes (2017):

Adopting PIAAC’s use-oriented approach to teaching numeracy ... more effectively prepares adults for real life numeracy tasks. ... Practitioners who embrace the idea that adults need to become numerate rather than ‘learn math’ should be able to create tasks that require all aspects of numerate behavior – context, content, responses, and representations... so that all students can continue to become more numerate adults. (p. 29)

Limitations

Several limitations are noted. First is the PIAAC measurement approach taken for non-English speakers. The BQ relied on self-reported data, whose reliability could vary depending on how well the respondent understood or chose to answer the questions. Also, the BQ was offered in English or Spanish, but skill assessments were offered only in English. Therefore, Spanish-speaking, first-generation immigrants in the dataset selected for this paper were at a disadvantage by taking numeracy assessments in English, and native speakers of all other languages in taking skill assessments and reporting use of skills at home in English.

Conclusions and Recommendations for Future Research

This paper has contributed new information on U.S. skill levels and skill use in adult EL numeracy. Disaggregating data by BQ language or measures of English proficiency was outside the scope but could generate informative comparisons in future studies. Future researchers could also consider disaggregating data on skill levels and use by length of residence in the United States. Other potentially useful comparisons would be to compare skill levels and use with those of adults from other OECD countries, particularly countries from which sizable proportions of ELs emigrated.

In keeping with this issue’s theme of broadening

the lens on adult education, adult educators may wish to consider issues of program design and assessment to support EL numeracy instruction. Program administrators and instructional staff need to consider how EL services are structured so that numeracy skill use and skill levels can increase along with language learning. Can numeracy instruction be added to existing EL classes or tutoring – and if so, how readily could numeracy be incorporated within the context of language instruction? Alternatively, would distinct numeracy classes or tutoring need to be offered? Adult educators could consider seeking grants from funders interested in strengthening health literacy or financial literacy in adults, to supplement instruction or contextualize numeracy.

Also, given disparity in numeracy skills of ELs taking English vs. Spanish BQs, asking how ELs can be assessed for numeracy skills fairly, in

the language they use most often, is reasonable. Future research could investigate available numeracy skill assessments in Spanish and other frequently spoken languages with validity evidence for adults, and researchers could make recommendations for assessment use in programs. While assessments might, or might not, meet National Reporting System requirements, they could provide diagnostic guidance, demonstrate learner progress in numeracy, and inform instruction without penalizing ELs for language skill differences.

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All Together Now: Supporting Immigrants and Refugees Through Collaboration

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Abstract

The United States needs strong collaboration among adult educators and all social service agencies that support the linguistic, economic and civic integration of refugees and immigrants. Such collaboration can make possible holistic support required to create linkages between English language education and other non-educational support services. We provide examples of several interagency collaborative projects across the United States. Further, we argue that such collaboration is essential to mitigate the limitations of current adult basic education policy, which falls short of supporting linguistic integration of English language learners at the lowest proficiency levels, implicitly prioritizing workforce development programming best suited for higher-level learners. We layout policy recommendations for the local, state, and federal levels and map out benefits of working as partners in advocacy with agencies that support resettlement and integration of adult refugee and immigrant learners.

Author Note: The authors would like to acknowledge the work of the Open Door Collective (ODC) and, in particular, its Immigrant and Refugee Education and Integration Issues Group, which initially spurred the collaboration that resulted in this paper. ODC, a program of Literacy Minnesota, is a national volunteer group of professionals working in adult education, public libraries, community health, workforce development, criminal justice reform, digital inclusion, and other social services. ODC members believe that adult basic skills education and lifelong learning programs can help reduce poverty and open the doors of opportunity for everyone to healthier, more prosperous and satisfying lives.

During times of political uncertainty, support for the linguistic, economic and civic integration of refugees and immigrants is vulnerable to shifts in public opinion and policy. At the time of writing, the U.S. executive administration has, for example, contributed to the notion that immigrants from particular parts of the

world are outsiders to be feared, rather than neighbors offering important social and economic contributions. Furthermore, given the potential for the extreme poverty caused by displacement to become intergenerational (Kallenbach et al., 2013), it is essential that immigrant communities are provided with focused and intensive support.

New types and levels of collaboration are required to push back against anti-immigrant and anti-refugee discourse and to ensure that immigrants receive the resources they need to support learning and integration into communities and workplaces. Collaboration aimed at sustaining well-coordinated programming, support services and advocacy can create a powerful synergy, amplifying the reach of all organizations involved (Kallenbach et al., 2013). Partnerships may start as local or statewide entities consisting of different providers working to support immigrants and refugees. Such joint efforts can better analyze significant gaps in existing services, identify needed programming, and engage in advocacy campaigns that are responsive to the needs of newcomers.

Supporting the Linguistic, Economic, and Civic Integration of Refugees and Immigrants

Given the complexity of the language and literacy skills necessary to thrive in the United States today, immigrants and refugees need sustained, high-quality, and timely language instruction. In many, if not most, cases, they also need case management support in order to cope with turbulence in their lives. However, the current adult basic education (ABE) system, as defined by the Workforce Innovation and Opportunity Act (WIOA)¹, offers only narrow support for certain vulnerable learners, such as individuals with limited English and low levels of prior education. Additionally, the outcomes used to evaluate programs receiving funds available under WIOA may have little to do with the lived experience of

newcomers. For many, the earning of secondary credential or matriculation into postsecondary schooling (two of the WIOA core measures) are distant goals.

Although states are free to establish secondary measures related to education, these are not reported to the federal government, and programs might feel pressure to enroll only learners whose goals align with WIOA core measures, leaving beginning-level learners and adults not in the workforce underserved. Furthermore, the lack of a coordinated immigrant integration effort at the federal level means that partnerships, rather than individual programs, are better positioned to remedy this gap in services (Colbern & Ramakrishnan, 2016). It is, therefore, incumbent upon states, municipalities, and local programs to work together to expand opportunities for holistic support and English language and literacy programming.

Such collaboration is not easy to establish and maintain, but strong examples are starting to emerge. For example, the English Plus Integration (EPI) initiative created by the Migration Policy Institute's (MPI) National Center on Immigrant Integration Policy aims to connect community-based organizations with providers associated with public health, education (K-12 and adults), early childhood education, and social services. Stakeholders involved in these efforts include recognized leaders and experts from immigrant and refugee communities, state and local governments, and the adult education, immigrant integration, and early childhood education fields. MPI has partnered with Unidos in several states to develop locally adapted

¹ WIOA defines how federal funding is used to support adult English language programming. Federal funding, supplemented by state money, supports English Language Acquisition (ELA) programs as part of free ABE system. Over 1.5 million learners in 2015-2016 (the last year for which aggregate participation data is available), 46% of whom enrolled in ELA programs (*Adult Education and Family Literacy Act of 1998: Annual Report to Congress, Program Year 2015 - 16*, 2019, p. 3)

versions of EPI to be piloted starting in mid-2020. One promising implementation model is Lifting Immigrant Family Trajectories, an initiative centered around a series of workshops on integration topics with interwoven supports for digital literacy and English language acquisition. Through joint planning, partners deliver locally integrated workshops to low income immigrants and refugees new to English and who need information on how to navigate systems such as financial services, medical care, and educational services.

Guidance for developing partnerships can be found in *Establishing and Developing ESOL Local Partnerships: An Effective Practice Guide* (2019). (See: <https://www.learningandwork.org.uk/wp-content/uploads/2019/04/ESOL-Partnership-Guide.pdf>) Though written to support local collaboration in the Great Britain, the guide provides a timely and applicable sketch of how interagency partnerships form and several illustrative examples. The Networks for Integrating New Americans (NINA) framework offers an overview and examples illustrating the strength of a network approach to building the

Examples of Collaboration Around Adult English Acquisition and Integration

The following examples illustrate the range of partnerships that expand educational opportunities for immigrant learners.

Seattle: Ready to Work is a municipal approach to supporting linguistic, social, and economic integration for immigrants and refugees new to English by involving the mayor and city council and Seattle city agencies: the Human Services Department, the Office of Economic Development and the Office of Immigrant and Refugee Affairs. These municipal players have partnered with a state and federally-funded adult education provider, *Literacy Source*, and *Asian Counseling and Referral Services*, a community-based organization, to offer beginning English language classes and provide employment and transition services with multicultural staff and interpreters proficient in the many languages spoken in the community and in the class, including Somali, Amharic, Chinese, Vietnamese (<https://acrs.org/>). Program success rests on case management provided by well-trained bilingual and culturally competent staff, most from the learners' home communities.

(See: <https://www.nationalskillscoalition.org/news/blog/ready-to-work-seattle-creates-new-on-ramp-for-immigrant-english-learners>)

Alliance for Language Learners' Integration, Education and Success (ALLIES), a coalition of adult schools, community colleges, and community-based organizations in Silicon Valley relies on partnerships to achieve "collective impact." *ALLIES* and its partners work at the grassroots level to support concrete initiatives and at state and national levels to advocate for supportive policies. Formed specifically as a collaboration of programs and agencies serving

English language learners, *ALLIES* partners have developed a multisector initiative to make the regional adult education system more transparent to clients and also facilitate learner transitions across programs or along an integrated pathway involving different agencies. (See: <http://www.allies4innovation.org/>).

Make the Road New York and its sister programs in New Jersey, Pennsylvania and Connecticut demonstrate the value of community-based organizations and advocacy groups coming together around issues relevant to the immigrant members of the organization. For example, *Make the Road New York* was successful in advocating for better treatment of grocery store workers. Such a victory was possible because *Make the Road* coordinated efforts with other advocates for workers' and immigrants' rights and because students enrolled in English classes were key resources in advocacy events (such as marches and rallies). The English classes and advocacy efforts support and reinforce each other, with pressing issues becoming part of the ESOL curriculum and students taking to streets to add their voices to calls for justice. (See: <http://www.maketheroad.org>).

English Innovations (EI), OneAmerica and Partnership for New Americans. The *English Innovations Initiative*, originally funded by the Bill and Melinda Gates Foundation, presents a national model connecting agencies and schools across the United States through efforts that take place outside the federally and state funded adult education system. Led by OneAmerica, an advocacy group in Seattle, eight host sites focus on community engagement and teach English and digital literacy to support immigrant integration. Host sites share a common curriculum (adaptable to local priorities and varying student groups), a common goal (individual and community empowerment) and a common instructional approach (intentional teaching and engaged learning). The program is now administered by the National Partnership for New Americans, an umbrella coalition of statewide immigrant rights coalitions, including local programs that combine service delivery such as adult education classes with community organizing. (See: <https://weareoneamerica.org/speak-your-language>)

capacity of local education and service providers in the United States (Kallenbach et al., 2013).

Advocacy in Support of Policy Shifts

Beyond coordinating local resources, agencies working together might also consider collaboration in advocacy in support of policy changes that strategically link a broad spectrum of organizational support for newcomers and ensure

that all learners have access to the language and literacy instruction they need.

Federal Level

Available funding for ABE in the United States has steadily declined overtime, now at roughly 10% per student compared to funding levels in 1965 (Jacobson, 2017), making it harder to serve a very diverse community of potential learners.

Given WIOA's workforce perspective, the goal of these federal-level recommendations is to increase educational opportunities for learners with little to no proficiency in English through additional funding and expanded access to existing programs.

Recommendation: Increase Funding for Family Literacy Programs. Lack of investment in parents and their learning creates the potential for poverty caused by relocation to develop into intergenerational poverty (Park, McHugh, & Katsiaficas, 2016). A high percentage of refugees are women and children; in 2015, nearly half of the 69,920 admitted refugees to the United States were children, 33,335 were women, and 35% of the women were principal applicants (U.S. Department of Homeland Security, 2016). However, funding for family literacy has been gutted, severely limiting access to adult education for mothers of young children who need access to English language services (Park et al., 2016). Funding for programs that support immigrant and refugee parents and families should be included in both federal and state funded programs.

Recommendation: Integrate Foundational English Classes with Workforce Training. WIOA provides for workforce development training services at "one-stop job centers" funded through the Department of Labor (WIOA, Title I) and intended to prioritize provision of service to "basic skills deficient" adults, which includes English learners who may not be prepared to participate in training due to their language skills. Currently, WIOA-driven performance constraints (e.g., employment and wage gain outcomes) create a disincentive for job training programs to enroll ELLs and still meet their performance goals. To provide more equitable access, Title 1 funded programs in American Job Centers (formerly known as "one-stop job centers") should be incentivized to *integrate* English instruction

with job skills training, rather than referring English learners to general English classes first for a sequential program of learning English, then job training. Such career focused on-ramps could allow learners, for whom it is appropriate, to develop basic English and occupational skills simultaneously.

State and Local Level

These recommendations for advocacy at the state and local level can help ensure that available funding, as defined by WIOA, is used to support relevant programming to the widest range of learners possible in any given community.

Recommendation: Support Access to Relevant Curricula. Refugees and immigrants should be provided with focused language acquisition services that are flexible and tailored to meet individual learners' needs. Advocacy at the state-level might include a call to prioritize the *secondary measures* allowed within WIOA (e.g., citizenship, voting, involvement in community and their children's education). Educational providers should work with learners and collaborating agencies to develop contextualized and relevant curricula leading to these outcomes by addressing a range of students' goals, roles and responsibilities, including citizenship and civic participation, immigrants' and refugees' roles as parents, and their needs as lifelong learners. Students need to be prepared to advocate for themselves, their families and their communities in multiple contexts. This means that taking action for educational, economic and legal justice should be part of the curriculum.

Recommendation: Open Access to Education. At the time of writing, the Deferred Action for Childhood Arrivals (DACA) program had been terminated by the Trump administration and its final status yet undetermined, pending a decision

from the U.S. Supreme Court. DACA allowed young adults brought to the United States as children (and without legal status) to work and study without fear of deportation. Though DACA's future is uncertain, agencies should continue to advocate for maintaining and extending programs that offer work authorization for immigrant youth who came to the United States as children. It is likely that any success in securing such authorization will require a high school diploma or participation in adult basic education programs; this means that more of such classes need to be readily available. Funding should also be available to support ELA programs for adults who may need English to meet legalization requirements once comprehensive immigration reform becomes a reality (Wrigley, 2015).

A Call for Unified Advocacy

Advocacy efforts and expanded learning

opportunities are especially important in light of the rhetoric and actions of our highest-ranking public officials. Strident interpretations and enforcement of deportation policies have violated human and civil rights and created a climate of fear in refugee and immigrant communities. In the United States, a great many organizations touch the lives of immigrants and refugees and, as we assert, innovative collaboration exists. Adult educators, advocacy groups, resettlement agencies, social services and immigrant-serving community-based organizations need to work together to assure equitable access to programs offering relevant language instruction and fair distribution of federal and state education funds for refugees and immigrants. Such collaboration can help us find common ground and meet a common goal: linguistic, economic, civic and social integration that benefits newcomers while at the same time strengthening communities.

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Forum: Broadening the Lens on Adult Literacy Education Outcomes

(Part 1 of 3)

A Lifelong and Life-Wide Framework for Adult Literacy Education

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In this forum, I argue that adult literacy education needs to be repositioned within a new framework of lifelong and life-wide learning, a framework in which new policies are formulated, programs are designed and evaluated, and research is funded and carried out. To appreciate how much this suggested framework differs from the neoliberal framework in which adult education is currently embedded, it is worth considering briefly how neoliberalism has gained its foothold in (some would say its stranglehold on) adult education.

Many who started their careers in adult education in the 1970s or before were initially drawn into the field by the strong connections among adult literacy, social justice, community development and human empowerment. Influenced by visionaries and activists such as Paulo Freire, adult educators once aimed for broad programmatic outcomes in social, economic and political arenas, both in the United States and around the world. The heady optimism and activism of adult education started to evaporate in the 1980s as the hegemony of neoliberalism developed, prioritizing “free markets” as the mechanism for solving a wide range of social, economic and educational problems.

Neoliberalism made inroads into all levels of education, emphasizing the “knowledge economy”

that valued individuals only as economic actors, essentially disregarding the importance of education for a wide range of individual and societal outcomes (Tett & Hamilton, 2019). Neoliberalism narrowed the purpose of adult education to increasing human capital as measured by increases in educational attainment and standardized literacy and numeracy test scores. National and cross-national assessment surveys of adult skills, education, employment and earnings (e.g., NALS, IALS, ALL, PIAAC) and a large body of research seemed to confirm the importance of both education and literacy and numeracy skills for economic success in countries around the world (e.g., Commission on Skills of the American Workforce 1990; Hanushek 2015; Kirsch et al 2007). In opposition to this juggernaut, strong critiques have been written about this burgeoning neoliberal framework (e.g., Street 1985, 1999; Hamilton 2012; Tett & Hamilton 2019).

The neoliberal framework heavily influenced public funding of adult education in the United States and other countries. In the United States, the Workforce Investment Act (WIA) and later the Workforce Innovation and Opportunity Act (WIOA) legislation funded programs tailored to help adult students increase their standardized test scores, obtain high school equivalency, find

employment or enter vocational training or postsecondary education. Practitioners often report that these programs are designed primarily to meet the needs of employers and workforce development stakeholders rather than the needs of the adult students. To be sure, many students have goals that are consistent with the workforce development agenda, but many other adults needing stronger basic skills have other learning goals and motivations. From what I've observed, many practitioners initially resisted the rigid testing and accountability regimes that WIA/WIOA imposed on their programs, but over time these regimes became more familiar and more widely accepted presumably because there were few alternative sources of program funding.

Practitioners and program administrators often report difficulties working within the WIOA framework to meet the needs of all potential adult education students they could serve. WIOA's funding and compliance regimes often effectively prevent programs from serving those most in need. In responding to these persistent limitations over many years, programs have slowly lost their capacity to attract funding that connects basic skills instruction with other social aims (e.g., social justice). Similarly, difficulties obtaining funding to study aspects of adult education not directly tied to WIOA outcomes can discourage young scholars who want to take a more critical stance from careers as adult education researchers. These challenges can make it more difficult for the field to attract new practitioners and researchers.

We need funding for basic skills programs that are designed to meet a broader set of lifelong and life-wide goals of adults and communities. The two key concepts here are lifelong and life-wide. I will consider each in turn. Lifelong learning is often understood to refer to learning that takes place at any age or life stage. In this forum, I also use the

term to refer to learning and changes that occur over substantial time periods across the lifespan. Program impact on life outcomes depends of course on the outcomes measured and the elapsed times after program exit when they are measured. Let me illustrate the importance of this time lag with two examples, one from public housing research and one from my own research on adult education.

The Move to Opportunity (MTO) experiment from the mid-1990s provides an example from public housing research. There is abundant evidence that individuals living in high-poverty neighborhoods fare worse than individuals living in lower-poverty neighborhoods in terms of a broad range of social and economic outcomes. In response to these neighborhood disparities, The U. S. Department of Housing and Urban Development conducted the MTO experiment, in which a randomly selected group of families living in housing projects in high-poverty neighborhoods were offered subsidized housing vouchers to move to lower-poverty neighborhoods. By generating large differences in neighborhoods for comparable families in public housing, the MTO experiment provided an opportunity to evaluate the impact of improving neighborhood environments for low-income families in the 1990s (Ludwig et al., 2013).

Initial evaluations of the MTO experiment found that moving to lower-poverty neighborhoods produced substantial improvements in health and well-being but no significant changes in the employment or earnings of youth or adults in the years immediately following the intervention. Chetty, Hendren, and Katz (2016) analyzed much longer-term outcomes in the administrative data records of MTO study participants. They found a very different result for employment and earnings: the young children of the families that moved

to lower-poverty neighborhoods had, as adults some 20 years later, substantially higher levels of education, employment and earnings than children in the control group who did not move into such neighborhoods.

Although there are many other interesting findings from the seminal MTO research, we already can see some important points relevant to our discussion. One important point is that program impacts take different amounts of time to develop after the intervention depending on the outcome measure followed. For the MTO experiment, the employment and earnings benefits of moving to lower-poverty neighborhoods were experienced only by the young children not the adults of the families moving to lower-poverty neighborhoods and those impacts became evident only a long time after the move took place. Such a transgenerational impact has often been suggested for adult literacy programs, whereby programs positively affect the educational and literacy outcomes of the adult students' young children (Sticht & Armstrong, 1994).

A second example of why it is important to evaluate outcomes long after adults go through programs or interventions comes from my own research on the impact of adult education programs (Reder, 2019). In this work, my colleagues and I followed a representative sample of low-education adults living in a metropolitan area over nearly a decade, collecting multiple waves of periodic in-home interviews, skills assessments and linked administrative data. Quasi-experimental comparisons were made of the outcome trajectories of those who chose to participate in adult education programs and of those who did not. The analyses indicated that program impacts on literacy skills, employment and earnings took about five years to mature fully after students left programs. The large long-term

impacts of programs on earnings averaged about \$10,000/year (in 2017 dollars) but were evident only in the long-term not in the short-term outcomes.

These examples illustrate that the impacts of interventions or programs can be substantial but can take time to develop after the experience in question. If evaluations are conducted using only short-term outcomes measures, they may miss much of the actual impact that programs are having. This happens consistently in adult education, where test score gains, educational transitions and employment changes are generally measured shortly after program exit. These literally short-sighted accountability regimes miss the longer-term impact that programs are actually having. Anecdotally, many adult education teachers can see longer-term impacts whenever they, in a chance meeting with a former student, hear comments such as "Oh Mr. Wheeler, you have no idea how your class changed my life!"

So, we need to approach lifelong learning in adult education not only in terms of offering instruction at diverse ages and stages of the lifespan, but also in terms of designing, evaluating and funding programs based on long-term outcomes. Although short-term outcomes may be useful for some programmatic purposes, we must not rely on them as our only or even as our primary measures of student learning and program impact. When I talk with practitioners and program administrators about doing this, they rightly ask about how programs can be held accountable for longer-term outcomes when so many other experiences and factors intervene between program exit and long-term outcome measurement. This is an important topic worth careful consideration and discussion. Another good question is how long-term outcome tracking might be efficiently implemented given how difficult and costly it often is for programs to

collect and report just the short-term outcomes required by WIOA funding. One promising technique here would be to use smartphone technology to collect periodic follow-up data from students (with permission, of course) relevant to the outcome measures.

Life-wide learning and outcome measures are also essential for adult education. The neoliberal focus of publicly funded programs in the United States is on employment, high school equivalency, and postsecondary training and education. Although these outcomes address the goals of many adults, many adults with basic skills needs have other goals that cannot readily be served within this framework. To begin with, millions of adults are not in the workforce due to age, disabilities, poor health, family care responsibilities, etc. Other adults wish to improve their basic skills for other reasons entirely, such as assisting their children with schoolwork, understanding and addressing their own health issues or those of family members, or participating in civic affairs such as voting or understanding political issues.

There is good reason to believe that suitably designed adult education programs could help millions of adults meet their life-wide goals. Authentic literacy instruction, structured around the literacy activities and purposes in individual adults' lives, is associated with increased engagement in literacy practices after students leave the program (Purcell-Gates, Degener, Jacobson, & Soler, 2002). Besides helping adults to apply their basic skills in activities to meet their personal goals, there may be important side effects of their increased literacy engagement. Recent research indicates that broad social outcomes such as social trust, general health, political efficacy and volunteerism – to name but a few – are positively associated with basic skills including literacy and numeracy (OECD, 2013). Although

educational attainment itself is a driver of many of these social outcomes, basic skills are also an important determinant of these social outcomes at each level of education, including individuals in the target population for adult education (Reder, 2017). Beyond this, adults' everyday *use* of their basic skills is associated with positive social outcomes when both educational attainment and assessed levels of literacy or numeracy are taken into account (Jonas, 2018; Reder, 2017, 2019). It is thus quite plausible that a more life-wide approach to adult education could help individuals meet their personal goals and help foster broader social outcomes such as general health, social trust, political efficacy and civic engagement.

We need to expand adult education by broadening our lens on its programmatic outcomes in both the lifelong and life-wide dimensions. There will be important benefits to expanding adult education in these ways. By designing and evaluating programs in terms of the longer-term outcomes they produce, it becomes easier to assess the actual impact that programs have, which in turn could make a more compelling case for funding. By using longer-term outcomes as criterion measures in program improvement processes, it should become easier to identify more promising program designs and implementations, thereby strengthening programs over time. By lengthening the impact intervals for programs, we may be able to see not only the full impact of programs on adults' lives, we may be able to include the intergenerational effects of improving parents' basic skills.

By expanding the programmatic focus of publicly funded adult education in the United States from its current narrow focus on human capital growth to a broader life-wide set of goals, programs could serve millions more adult learners in need of better basic skills. This expansion would not

only help adults with a broader range of personal goals to improve their basic skills, it would likely increase overall levels of literacy and numeracy engagement in the population with attendant increases in general health, social trust, political efficacy and civic engagement. These improved social outcomes would benefit not only the individual students but also their neighborhoods and society more generally. Think about the community and societal importance of higher overall levels of general health, social trust, political efficacy and civic engagement.

What are some of the key strategic considerations in trying to advocate for this sweeping reform of adult education in the United States? We should position this reform as adding to rather than replacing existing WIOA programs. With their narrow and short-term focus on employment, WIOA programs are part of a workforce development system that helps meet the needs of many adults in the workforce and their employers. This serves an important function in

our economy and society. We nevertheless need public funding for other kinds of adult basic skills programs organized in a lifelong and life-wide framework. It is essential that this expansion to the adult education system is made through an evidence-based process from the very beginning, systematically addressing questions about program design and quality in terms of adult students' long-term outcomes. It might be helpful to have a federal office or agency overseeing the implementation and evaluation of these lifelong and life-wide adult education programs. We may need both public and private funding to support the basic and applied research that can drive the evidence-based system.

By broadening the lens on program outcomes in these ways, I hope some of the optimism and activism of an earlier era of adult literacy education can re-emerge and find traction in a more expansive system of adult education with a lifelong and life-wide focus on individuals' life outcomes.

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Forum: Broadening the Lens on Adult Literacy Education Outcomes*(Part 2 of 3)*

Examining the Role of Federal Adult Education Funding in Adult Literacy Education

Judy Mortrude, World Education, Inc.

First, Steve Reder is right. No one in the field of adult education is going to argue against Steve's conception of skill needs across the length and breadth of adult life. And certainly no one is going to argue against the need for more resources over and above the perpetually starved federal Workforce Innovation and Opportunity Act (WIOA) system to fund Steve's conceptual framework.

Beyond agreeing, I do think it is helpful to examine the role of federal adult education funding inside the lifelong and life-wide educational framework as both a way to value federally funded adult education programs and services AND a way to imagine the *other* funds, programs, and services needed to provide for skills needs across the length and breadth of life.

Lifelong learning in its platonic ideal would be a high-quality, fully accessible continuum of early childhood education, elementary and secondary school, postsecondary undergraduate and graduate schools and continued upskilling opportunities as digital displacement changes jobs and the pace of change in the digital economy leaves the knowledge economy behind. Unfortunately, quality universal early education is far from a reality in the United States, and the recent Programme for International Student Assessment again demonstrates that our

elementary and secondary education systems need strategic investment and redesign to serve students better. College for all is a common rallying cry, but who gets what in the world of postsecondary education is largely still determined by income and race.

Adult basic education's role, from the beginning, has been about serving people with foundational skill needs. Except for highly skilled immigrants (now welcomed into WIOA as a target population via the Integrated English Literacy & Civics Education program), adult education participants are generally those failed by their public education system, whether here in the United States, in a home country, or in displacement.

Adult education as part of a broader safety net of social services catches some few (by no means all) people who have fallen off that lifelong learning path at some point. Some states limit adult education programs to serving only those without a high school diploma or equivalent, but very clearly foundational skill need is not defined by the secondary credential. The federal eligibility criterium is simply a demonstrated educational need.

The original federal investment in adult education came as part of the Great Society movement, part of the war on poverty. In 1966, the goal of

adult education was to help people achieve an 8th grade level of education - a level needed for self-sufficiency in the economy of the time. Over time, as that standard changed, adult education became more about high school completion, and now adult education has more focus on college and career readiness.

Federal educational investments are about equity, about delivering certain program models/services to specific targeted populations, (pretty much) regardless of your state's governor and lawmakers. State investments, of course, can do a whole lot more. In 1856, California brought us the first adult school which provided English language learning to communities with foreign born populations. Over time, California invested to create a large system of comprehensive adult schools. Then California's adult education investment was nearly "flexed" out of existence during lean budget times when local educational agencies opted to use the state funds to keep K-12 systems afloat. (*The 'deservingness' question looms large over adult education - who deserves educational investment? Didn't those high school dropouts have their chance? Shouldn't those immigrants already know English before coming here?*) California's adult education system has now roared back to life with an annual investment nearly matching that of the federal investment across all 50 states and territories. Yet the federal adult education funds and their required state maintenance of effort funds kept classrooms open during those lean times.

Steve warns against the very real danger of a society that "values individuals only as economic actors." The focus on economic outcomes for federal investment, the search for an elusive "return on investment," can certainly skew decisions and influence services offered in communities. However, to create at minimum a baseline of basic adult education services across

the 50 states and territories, I am grateful to have a federal investment that comes with eligibility criteria, program service models, and performance accountability. Having said that, I believe our field has been *far* too cautious in using the tools inside WIOA to shape a program to benefit our learners. As a moonlighting evening GED teacher in the 1980s, I entered a field blossoming with adult education theory: Malcolm Knowles codified his andragogy framework; Thomas Sticht detailed Functional Context Education; and Equipped for the Future helped us think about providing the services and settings needed to help adult learners not only survive but also thrive and strive.

Unfortunately, during the years under the Workforce Investment Act (WIA), we proved the maxim of "what gets measured is what gets done" and became way too good at meeting the federal WIA performance targets based on standardized test gain. Educational Function Level (EFL) gain became the goal. Thanks to philanthropic investment and federal innovation funds, we also innovated and experimented and helped shape WIOA, the law that would allow us to break out of pretest/posttest as the only valuable form of learning gain. Yet, because of the measurement systems established under WIA, test gains still dominate.

It is time for our field to seriously revisit how we demonstrate skill gain. In the world of multiple measures, when people don't even need to take a standardized test to go to graduate school, our students can only prove they are learning by scoring a few more points. Most WIOA Title II funded programs are still living and dying on EFL. Why? It's the only WIOA performance measure that is a "negotiated performance target" - a level set by negotiation between the U.S. Department of Education and state adult education offices, but other performance measures

are being collected and could become the focus of our work. For example, WIOA's Measurable Skill Gain contains five ways to measure progress, including training milestones or passing an industry exam as well as transition into postsecondary education. While WIOA partners are now collecting these measures, within limited context and with great variability, the measures are not what "counts" in a states' performance report with the federal agencies.

As Steve points out, outcome measurement systems are costly to implement and very slow to adapt. The WIOA outcomes could but haven't adjusted to innovative service delivery models focused on communities with the greatest need for public services. WIOA's precursor, the WIA, had locked the public workforce development system into a labor exchange model - a triage model rewarded for job placement and job retention - keeping the same job for six months. WIOA offers a career pathway approach - a wellness model - with exit measures focused on educational credential attainment and employment.

Unfortunately, just as adult education continues to focus on EFL, the public workforce system as a whole is still very much focused on short term activity rather than providing the intensity and quality of education, training, and other services that can make a longer-term impact on a participant's life.

The promise of shared accountability in a co-enrollment environment, where partners across a community WIOA partnership could dually enroll an individual, leverage one another's staff and resources to provide services within their area of expertise, and each take credit for all performance outcomes an individual achieves regardless of "who paid for what," hasn't been realized. No one is studying WIOA outcomes yet because we haven't fully turned on the complement

of WIOA measures mapped against the list of population characteristics (demographics, barriers) that would help us see if our equity investment is moving the needle for those who need us most. A well-kept secret in WIOA performance is the regression model, designed to reward states and programs that serve individuals with the most "barriers." While riddled with deficit language, the concept is worth trying. What would it be like to intentionally choose to recruit and serve people in our communities that need our services the most?

But even if we fully operationalized the career pathway vision inside WIOA, it would still only provide a system focused on education for college and career readiness and advancement. We know that's not an exhaustive way to measure adult education's impact. Just as no program should live exclusively on WIOA Title II funds. It's not healthy for the program which will suffer greatly at whims (government shutdowns; draconian federal budget cuts); and it isn't healthy to have all your performance measures dictated by one fund. We need *other* measurements supported by *other* funds.

The ALLIES (Alliance for Language Learners' Integration, Education, and Success) Immigrant Integration Framework provides eight goals areas with corresponding metrics, designed to measure two-way integration that benefits both the immigrant and the receiving community. This life-wide conception includes economic security, educational and career advancement as well as health and well-being, providing for children and family, and participation in civic and community life. Imagine the power of having this vision at the heart of adult education - not just for immigrants but for all of us as we seek a revitalized civic discourse and equitable economies. This would require adult educators to think expansively about their partnerships and their services and the way they frame their own value in their communities.

Last year's Minds that Move Us Career Pathways Challenge illustrates another way of defining our value. Johan Uvin's Institute for Education Leadership delivered a rapid year of program development culminating in an August 2019 Adult Career Pathway Festival featuring 10 teams pitching their solutions to identified community needs. The teams didn't define their value in terms of educational functioning level gain or even credential attainment, but instead put the focus on adult education as a solution to tangible community problems, e.g.: Latinx injuries and deaths on construction sites; aging community members in need of home care; historic, systemic trauma impacting individuals and community systems. There is so much to be learned from this way of reframing adult education's impact.

Perhaps if we can see our work within that larger integration and community context, we will be ready to capitalize with partners on new investment. Federal bills continue to percolate in Congress, including the Digital Equity Act which would support state planning and investment in digital infrastructure and skills, the SKILLS Act which would establish a workforce

retraining entitlement for working learners; and the New Deal for New Americans bill that lays out a positive, pro-active vision for immigrant integration across a range of issue areas, including establishing a new \$100M English as a Gateway to Integration grant program and a new \$100M Workforce Development and Prosperity grant program that would support Integrated Education and Training models. At the state level, governors are supporting Future of Work conversations that need adult education's voice and at the local level, someone in your community right now is discussing Census 2020 activities where you can play a role in delivering resources and representation for your community.

Finally, our solutions need to be driven by our community needs. Any adult educator will tell you that the best part of the job is working with adult learners whose tenacity and curiosity inspire us daily. Working with the people in our classrooms and communities, we can and must develop new practices, measures, partners, and funding opportunities to broaden our work and lengthen our impact.

**Forum: Broadening the Lens on Adult
Literacy Education Outcomes**

(Part 3 of 3)

Toward a Vision of Movement Building in Adult Literacy Education

Ira Yankwitt, Literacy Assistance Center

Recently, a colleague of mine in his 20s asked me when and why the discourse in the field of adult literacy education shifted from the language of “human rights” and “social justice” to the language of “human capital” and “workforce development.” My response: the 1990s, neoliberalism, and the subsuming of federal funding for adult literacy education under the Workforce Investment Act (WIA) in 1998.

Neoliberalism has been the prevailing economic ideology in the United States for the past four decades; and, as Stephen Reder alludes to in his article, *A Lifelong and Life-Wide Framework for Adult Literacy Education*, the core tenet of neoliberalism is a faith in “free markets” to address all social, political, and economic ills. Neoliberal doctrine promotes free trade, deregulation of business and industry, decreased government spending, and greater privatization of services, and it regards individuals first and foremost as economic actors (i.e., workers and consumers). As Reder notes, neoliberalism narrows the purpose of adult literacy education to “increasing human capital.” It justifies public investment in adult literacy education primarily for its potential to meet the needs of employers, expand the available workforce, and, ultimately, to grow the economy as a whole. Based on the norms of the market, neoliberalism strives to maximize

efficiency and seeks measurable, near-term returns on investment; and, as codified in WIA (and later WIOA), it requires our field to measure the effectiveness of our programs principally by demonstrating students’ success at increasing standardized test scores, attaining credentials, and entering into further training or employment.

As Reder points out, while the neoliberal understanding of the purpose and value of adult literacy education aligns with the employment and workforce goals of many of our students, it devalues other goals and motivations. It also fails to recognize that the economic outcomes it prioritizes sometimes only emerge over time. In response, Reder argues for a more expansive “lifelong” and “life-wide” framework that would measure impacts over longer periods of time and would be “structured around the literacy activities and purposes in individual adults’ lives.”

While I share Reder’s critique of the current system and applaud his vision for a lifelong and life-wide framework, Reder’s article raises several questions for me:

1. Is it possible for adult literacy programs to truly deliver on the promise of empowering students to achieve their life-wide goals without also participating in broader

movements that seek to transform the oppressive social, political, and economic forces that circumscribe students' lives?

2. Given neoliberalism's focus on maximizing short-term return on public investment, and given the number of our students who enter at the lower levels of literacy and English language proficiency, will continuing to promote adult literacy education as an essential component of the workforce development system ever be a winning strategy for increasing funding for our field? Or is wedding ourselves to neoliberalism and attempting to justify the value of our programs by their workforce outcomes ultimately a losing proposition?
3. In many of our students' communities and/or countries of origin, neoliberal policies have caused economic decline, a reduction in resources and services, and displacement. As community educators, how should we respond to this reality? Should we be tacitly accepting the neoliberal paradigm and our designated role within it? Or should we be actively critiquing and challenging neoliberalism itself?

In the 20 years since the implementation of WIA, federal funding for adult literacy education has remained largely stagnant, and actually decreased in inflation-adjusted dollars from FY2001-FY2019, despite the fact that the field serves fewer than 5% of those in need. Yet over these two decades, the field has moved away from identifying itself as part of the broader struggle for human rights and social justice. I contend that for those of us working with and in marginalized, exploited, and under-resourced communities, we must align our programs fully and explicitly with the grassroots movements for racial, social, and economic justice that are working to dismantle systemic inequities.

To me, this is both a moral imperative and, as I've come to believe through my experience in New York City, a smart political strategy. Indeed, I would argue that it is only by aligning ourselves with grassroots movements for justice that we can hope to also build the movement we need to elevate the importance of adult literacy education, increase funding, and advocate for a system that makes it possible for our students to truly realize their lifelong and life-wide goals.

I first entered the field of adult literacy education in 1993, after spending three and a half years teaching junior high school social studies in one of the lowest income, most under-resourced neighborhoods in NYC. Inspired by the work of Paulo Freire and other radical educators, I envisioned adult literacy classrooms and programs as spaces to give voice to students' knowledge and experiences and to provide them with the quality education that had been denied them by the inequitable school system I had observed firsthand; to critically interrogate the social, political, and economic discourse and institutions that impacted their lives; and to engage in collective action with others in their community to challenge and transform those systems.

I was working in a community-based organization near East Harlem where many of our students were women on public assistance who had endured inferior educations in the notoriously segregated NYC public schools and, as adults, were developing their own goals for the education that had been denied them. That fall, Rudy Giuliani was elected mayor and, almost immediately, began vilifying public assistance recipients. Capitalizing on the incendiary, racist myth of the indolent "welfare queen," the Giuliani administration began to embark on what would become the most ambitious "workfare" program in the country. Our students were under attack from our mayor

and were at immediate risk of being pulled out of their classes and sent to work in city jobs that had historically been filled by unionized workers—losing their opportunity for an education in NYC for the second time in their lives—and getting paid less than minimum wage to perform often dangerous jobs in city parks and buildings. To many of us, workfare appeared to be a modern-day form of public indentured servitude.

Throughout 1994 and 1995, our program—and the field as a whole—organized. We developed critical reading lessons around the history of welfare in the United States and myths and facts about welfare, deconstructing the rhetoric. We designed math lessons that compared and contrasted the portion of the federal budget that went to welfare to the portions that went to other expenditures, like the military. We had students engage in budgeting exercises that demonstrated the absurdity of the claim that one could live comfortably relying only on public assistance and food stamps. Our students wrote testimonials to present to policymakers and spoke out in public forums. We all marched in mass demonstrations. Perhaps most significantly, we formed alliances and worked in solidarity with longtime welfare rights and labor activists. The right to adult literacy education became part of the platform of welfare rights organizations, and the expansion of rights and benefits for all welfare recipients became part of the platform of adult literacy advocates.

We lost. Badly. Women on public assistance continued to be pulled out of our program until virtually none were left. In 1996, Giuliani's draconian workfare policy was enshrined into the federal Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) signed by Bill Clinton. Two years later, WIA was passed, reframing how our work would be understood and evaluated. Yet, for me, the

experiences of those two years reinforced my sense of the power and purpose of adult literacy education and my sense of responsibility as a community worker and educator. It taught me that we need to look at our students holistically, not just as “adult literacy learners” but in the fullness of their social and personal identities and in the totality of their lives. It taught me to listen. It taught me how to ground curriculum and instruction in the real-life issues our students and their communities were confronting and connect learning in the classroom to action in the world. And it taught me about the power and potential of “intersectional” organizing—organizing that is rooted in an analysis of the multiple, interconnected forms of discrimination and oppression our students face.

WIA was enacted in 1998. After fighting against a “work first” policy for public assistance recipients, we were now being told to prioritize employment outcomes for even more of our students. Both the PRWORA and WIA emphasized reducing long-term costs to government, economic return on public investment, and meeting the needs of employers and markets rather than achieving educational equity and the full human potential of all. Yet, over time, we accepted our role and have continually tried to make the case that we are an essential and effective part of the human capital/workforce development system, worthy of increased funding. But in NYC, it's becoming increasingly clear that this approach isn't working.

New York State's current investment in adult literacy education is over two times its WIOA funding. Yet, like the federal funding itself, these funds have remained stagnant for the past 20 years, and NYS only serves about 3% of those in need. The argument that adult literacy education is critical to workforce development and economic growth has been met politely by policymakers and

funders but has never been truly embraced. Just last year, NYS announced a \$175M investment in new workforce development funding. Yet not a single dollar is slated for an increase in adult literacy education. Here in NYC, there is significant private philanthropic support for workforce development, including a consortium of foundations that pool resources specifically to fund workforce development programs. Yet, recently, a senior staffer at a large foundation told me candidly that, while he recognizes that language and literacy skills and a high school diploma are necessary for economic security, his foundation was unlikely to substantially fund adult literacy education because they do not see evidence that as our students move up through the NRS levels, their income increases significantly. The reality is that with limited resources to invest in workforce development, there is skepticism that investing in adult literacy education will yield the immediate employment outcomes and short-term economic returns that funders seek, given the number of our students who enter at the lowest levels of literacy and the length of time they may need to improve their skills enough to be able to obtain living-wage jobs.

Despite this, adult literacy programs in NYC have seen a boost in their funding over the last four years, and the story of how we achieved this increase is instructive. For several years now, a number of prominent immigrant rights organizations in NYC have played a central role in our local adult literacy advocacy coalition and have framed the expansion of ESOL classes within broader immigrant access, immigrant integration, and immigrant justice agendas. In 2014, after the election of a new city council, we found a champion for whom this message resonated: the council's first Mexican American member, originally from El Paso, Texas, for whom the issue

was both personal and fundamentally a matter of social justice, particularly in a “sanctuary city” that claimed to be committed to safety and opportunity for all immigrants. As a result of this framing and significant grassroots mobilizing and activism, we were able to secure a nearly fivefold increase in city funding for adult literacy services in 2016 (from \$3.5M to \$15.5M) and have been able to maintain this funding for each of the subsequent years.

I've come to believe strongly in this model of forging alliances and working in solidarity with grassroots organizations, both to build power for our students and afford our field increasing opportunities to bring our perspectives to the broader visioning for social justice. Which organizations and movements we align with will be particular to the social identities of our students and the communities each of our programs serve, and the point of entry may either be through a specific, issue-based campaign or a broad-based, more comprehensive platform. One hypothetical example may be useful:

In cities throughout our country, there are any number of educational justice organizations fighting for fair and equitable funding for all schools and students, universal pre-K, an end to the segregation or re-segregation of public schools and districts, greater diversity and representation among faculties and administrations, culturally responsive curriculum and instruction, replacing harsh punitive discipline with restorative justice programs, and access to affordable higher education for all. Yet, in many cases, these organizations don't include adult literacy education as part of their agenda. Issues of educational equity are critical to our students, both because many are parents and because these issues are connected to other political and economic inequities impacting their lives.

Aligning our programs with educational justice organizations and examining these issues in our classrooms can embolden students as agents of social change for their families and communities. This kind of collaboration can also create opportunities to call attention to the issue of adult literacy with educational justice organizations and to potentially integrate adult literacy education into their agendas.

In 2019, my organization, the **Literacy Assistance Center**, launched the **Literacy & Justice Initiative**. The goals of the initiative are to engage and empower adult literacy students around issues that affect their communities; to strengthen grassroots organizing and situate adult literacy education within wider movements for social and economic justice; and to assemble a broader coalition to expand educational opportunities for the 2.2M adults in NYC without a high school diploma and/or English language proficiency. The initiative currently has 45 community partners, including

publicly funded adult literacy programs, workers' rights and immigrant rights organizations, advocacy groups, and grassroots community-based organizations. We are now working with these partners to build a cross-sector collaborative network, share resources, engage in peer learning, cultivate grassroots leadership, and explore the potential of organizing for collective action.

I am inspired by and deeply committed to Reder's vision of a lifelong and life-wide framework for adult literacy education, one that moves beyond the neoliberal paradigm and embraces the diverse goals and full humanity of all of our students and their communities. And I believe that it is only by building alliances, working in solidarity, and engaging in intersectional movement building with grassroots racial, social, and economic justice organizations that the field of adult literacy can truly achieve this vision.

Review of *Turning Points: Recent Trends in Adult Basic Literacy, Numeracy, and Language Education*

Elisabeth Gee, Arizona State University

The impetus for this timely publication was several recent developments with potentially significant implications for the field of adult basic education (ABE), including new federal adult education authorization, the release of a new version of the

GED test, and new content standards for ABE curricula.

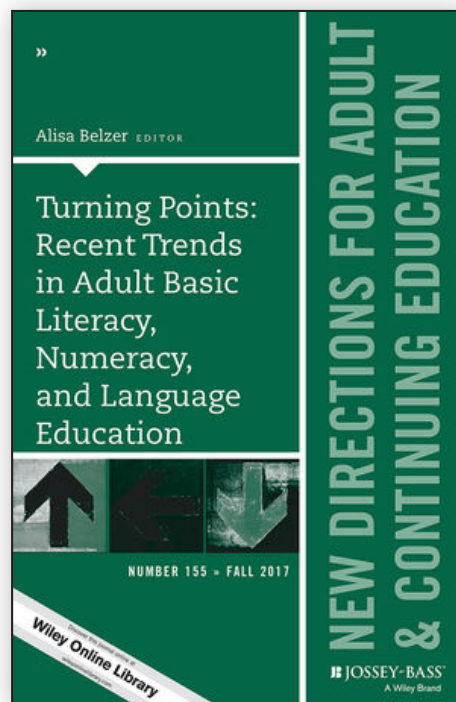
Turning Points is a volume in the long-standing series, *New Directions for Adult and Continuing Education*, and reflects the standard format for the series: a collection of short chapters, written in an accessible style, on a significant topic for adult and continuing educators. In this book, editor Alisa Belzer has recruited a group of contributors with an impressive range of experience in the field to address the question of “where the field

is in relation to where it has been and to where it might go” (p. 5), particularly in light of the new federal legislation, research findings, and changes in content standards and assessments.

In Chapter 1, Belzer sets the stage for this discussion with a clearly written and concise overview of federal policy initiatives that have shaped the provision of ABE over the last 25 years. As she points out, although the federal

government provides less than half of the financial support for adult basic education, its policies play a significant role in shaping the field’s priorities, programs, and practice. Belzer uses the metaphors of narrowing and focusing as a means of characterizing the potential consequences of policy initiatives. Focusing as applied to ABE implies a deepening understanding of and appreciation for the broad and complex nature of literacy practices in the context of learners’ lives, with a corresponding emphasis on more differentiated,

responsive, and informed educational strategies. In contrast, narrowing implies increasingly restrictive definitions of “what counts” in literacy education, often leading to one-dimensional



conceptions of literacy, learners' lives, and appropriate instructional approaches. As Belzer discusses, in the 1990s, our understanding of adult literacy became more expansive, shifting from a view of literacy as a set of decontextualized skills to socially situated practices of meaning-making, and many literacy educators embraced a broader, social justice orientation to literacy education. At the same time, however, at the policy level, the trend clearly was towards a restrictive emphasis on linking adult basic education to employment-related skills and outcomes. This emphasis continues with the most recent Workforce Investment and Opportunity Act (WIOA), along with preparation for postsecondary education as a means of enhancing participants' employment opportunities.

The next several chapters address specific policies and initiatives in more depth. In Chapter 2, Eric Jacobson discusses the WIOA in greater detail, noting the increased emphasis on helping ABE students make transitions to further education or training, the integration of education and employment training, and serving the most vulnerable populations. Jacobson points out that holding ABE programs accountable for students' success in finding employment or higher wages does not account for wider economic trends that include the creation of more low-wage, low-skilled jobs. The broad conception of literacy that informs the OCED's Programme for the International Assessment of Adult Competencies (PIAAC), described by Sondra Stein in Chapter 3, offers a counterpoint to the WIOA's narrow emphasis on preparation for work. The PIAAC framework is based on a broad notion of competence in literacy, numeracy, and problem-solving in technology-rich environments. Stein illustrates in a concrete fashion how this framework can be used as a basis for designing instruction that helps learners

develop skills through engagement with real-world tasks, texts, and contexts. In Chapter 4, Lennox McLendon offers a fascinating insider account of the decisions that led to the content and format of the latest version of the GED test, as well as the creation of additional credentialing options.

The remaining five chapters address broad topics such as the role of digital technologies in ABE, educational services for adult immigrants, professional development for adult basic education practitioners, recent research findings, and gaps in the current knowledge base. Together, the chapters create a picture of a field that, on the one hand, has made progress in areas such as addressing digital literacies, creating more formal professional development opportunities, and developing a stronger research base. On the other hand, these accomplishments are fragmented; for example, professional development opportunities are unevenly distributed, and ABE still relies primarily on part-time teachers with few credentialing requirements. The tension between focusing versus narrowing in relation to the goals and priorities of adult basic education is evident throughout the chapters. For instance, in Chapter 5, David Rosen and Jenifer Vanek discuss how digital technologies have expanded our conceptions of literacies and texts, and they recruit the concept of "lifewide learning" to emphasize how new technologies have expanded our opportunities to learn across multiple life settings. These conceptions do not align easily with a narrow emphasis on passing standardized tests or obtaining entry-level jobs.

A strength of this volume is the overall quality of information, expertise of the authors, and clear writing style. While the book has nine chapters, it is less than 100 pages long, and written in a way that should be accessible to readers with varied degrees of familiarity with adult basic

education practice or scholarship. The reader will encounter a number of acronyms for policies and programs, but these are explained in the text and are necessary given the topics. Newcomers to the field will find the book very helpful as a concise overview, while more experienced practitioners and researchers will find new information and perspectives. Unlike some edited volumes that lack coherence, *Turning Points* was obviously well-conceptualized, and the chapters fit together well.

The chapter authors attempt to provide a balanced view of recent policy trends and program initiatives, but a common theme is concern over the growing emphasis on linking ABE to employment and the pursuit of postsecondary

education. Personally, I share this concern, but the current social and political climate does not bode well for any significant shift in federal policy directions in the near future. For most ABE practitioners, the question will be how to best support adult literacy learners within the constraints imposed by existing program and policy directives. The authors offer some broad suggestions, but this book is not intended to be a practical guide for ABE instruction or program development. It offers a broader perspective that can help practitioners put the challenges they face in a wider context, prompt further research, and hopefully stimulate continued attention to the role of the federal government in shaping policies and priorities in ABE.

Belzer, A. (Ed.) (2017). *Turning Points: Recent Trends in Adult Basic Literacy, Numeracy, and Language Education*. New Directions for Adult & Continuing Education (No. 155). San Francisco, CA: John Wiley & Sons. 113 pages. \$29.00 Paperback; \$23.99 E-book. ISBN: 978-1-119-44378-0

Are Transitions a Sufficient Goal for ABE Students or Programs?

Bob Hughes, Seattle University, and Christine Knighton, Highline College

Reading the Federal Register announcement (U.S. Department of Education, 2016) of Title II of the Workforce Innovation and Opportunity Act (WIOA) offers a glimpse of WIOA's priorities. These priorities are important because they drive funding allocations for adult basic education in the nation; and that funding, in turn, determines how funded programs operate in order to receive that funding. As the largest funder of adult basic education (ABE) in the nation, providing over \$600 million through its Basic Grants to States (U.S. Department of Education, 2019), WIOA drives ABE policies and practices.

A review of the announcement on Title II shows how much the concept of transitioning beyond basic skills has become critical. The phrase "transition to" is repeated 46 times throughout the document and is clarified with language that brings the importance of transitions to the forefront. Basic skills learners attend classes not as an end, but rather as a point that takes them forward to something else, as noted in this explanation:

WIOA retains and expands the purposes of AEFLA [Adult Education and Family Literacy Act]. Under WIA [the legislation that WIOA supersedes], AEFLA aimed to help adults improve their educational and employment outcomes, become self-sufficient, and support the educational development of their children. Under WIOA, AEFLA's

purposes have been expanded to include assisting adults to transition to postsecondary education and training, including through career pathway programs. Further, WIOA formalizes the role of adult education in assisting English language learners to acquire the skills needed to succeed in the 21st-century economy. (U.S. Department of Education, 2016, Subpart A—Adult Education General Provisions 463.1, p. 55529)

The shift described above should not be overlooked. The unapologetic emphasis is on education for learners' economic gains. While WIOA-funded ABE can support parenting development, civic engagement, and other ancillary outcomes, transitions for economic impact provides a significant focus. Basic skills have become primarily about "transitioning to" to benefit learners' career and economic needs.

The connection between literacy and employment is not new, however. As Bannon (2016) shows in her analysis of adult literacy in the 1960s, the Adult Education Act (part of Title III of the Elementary and Secondary Education Act) was passed into law in 1966 as a follow up to the 1964 Economic Opportunity Act, and it was connected to Lyndon Johnson's War on Poverty. She argues that during this era, the notion of literacy for economic benefit gained hold as the idea of literacy as "capital" became more entrenched in the thinking and policies that accepted that:

An individual's character is defined by that person's possession of the abilities to read and write. Literacy is capital, a marker of status, as are cars, clothes, and other material goods that signify one's economic standing. Illiteracy, by contrast, signifies little education, poverty, low-paid work, all of which in turn signify immorality, bad citizenship, and dependence. (Bannon, 2016, p. 319)

Much of what now exists has evolved into commonly accepted and believed values that now define policies and practices. Over the past 25 years, especially, that evolution has been driven by adoption of national and state standards that changed focus. As recently as 2000, though, there was a more complex purpose for basic skills beyond being a springboard for employment and economic advancement. At that time, the Equipped for the Future (EFF) Content Standards of 2000 formed the basis for many state standards that were used to establish policies and practices during the first decade of this current century. In the 2001 publication of those standards that are subtitled "What Adults Need to Know and Be Able to Do in the 21st Century" (Stein, 2001), the authors describe a 6-year process for developing those standards. The process engaged over 1,100 stakeholders that included practitioners, employers, academics, and policy makers to design the four skill areas of the EFF Content Standards:

1. Communication Skills
2. Decision-Making Skills
3. Interpersonal Skills
4. Lifelong Learning Skills (Stein, 2001, p. 17)

As a lengthy document outlining the standards for each of these skills areas, the EFF Content Standards explicate how each skill is developed and measured. The authors note that:

EFF will enable the field to expand what can be measured so that programs can demonstrate how they systematically

contribute to achieving all three purposes of the Adult Education and Family Literacy Act—to assist adults in 'obtaining the knowledge and skills necessary for employment and self-sufficiency' and in 'the completion of secondary school education,' and to assist 'parents in obtaining the skills necessary to be full partners in their children's educational development.' (Stein, 2001, p. 64)

These four skill areas and three purposes made the EFF Content Standards an ambitious and holistic touchstone for ABE. While employment is considered as an outcome in the EFF Content Standards, it is connected to one outcome among three. The phrase "transition to" is only used twice in the document: once in a warning to adult basic skills providers and policy makers of the needed supports required in the transition process, and once in a standard that requires learners to use their "... skills and strengths in new ways to transition to other jobs or careers" (Stein, 2001, p. 143).

In his analysis of conflicting epistemological perspectives in ABE, Demetrian (2005) devotes a chapter to the challenges that the EFF Content standards faced in the early 2000s as the dominant federal policy requiring empirically based analyses of impact ran against the more holistic view of growth and development espoused by the EFF Content Standards. The U.S. Department of Education at the time emphasized a need for showing quantitatively based results in all its programs, specifically through the National Reporting System (NRS), which began operations in 1999 (American Institutes for Research, 2019). For the federal government to fund and to support any efforts, they required clear and observable outcomes. As Sticht (2008) notes, those outcomes were muddled as NRS began because of how they were gathered and reported nationally; however, the reliance on quantitative outcome measures was clear. The focus on transitions as a measurable outcome of ABE efforts grew from that emphasis on measurement. "Transition to" provides markers

for success and provides a purpose much less encumbered than the complexity attempted by the EFF Content Standards. Additionally, “transition to” offers a close connection to policies that emphasize the importance of basic skills for employment.

In the past decade, states focused less on the EFF Content Standards than on standards that support transitions beyond basic skills. States now look elsewhere to find a footing that supports the federal funding mandates that emphasize employment pathways. Most significantly, the College and Career Readiness Standards (Pimentel, 2013) have gained ascendancy as the U.S. Department of Education has encouraged states to see those as a bridge between the Common Core Standards in K-12 schools and education beyond secondary schooling. The department’s online explanation is that, “The integration of College and Career Readiness standards into adult education programs is intended to provide all adult students with the opportunity to be prepared for postsecondary training without needing remediation” (Literacy Information and Communication System, 2019).

The U. S. Department of Education offers evidence to support the value of “transitions to” as a focus of basic skills. In a 2012 report, the U.S. Department of Education Office of Vocational and Adult Education (2012) identified three “bridge” programs that assist basic skills students transition beyond basic skills. That report highlights the low numbers of typical basic skills students who matriculate beyond basic skills and provides evidence of the positive impact of these three programs in addressing that lack of transition in other programs. Citing two studies conducted by Jenkins, Zeidenberg, and Kienzl (2009) and Zeidenberg, Cho, and Jenkins (2010) of the I-BEST program in Washington state, the report concludes that, “Findings suggested

that being enrolled in a college that offered I-BEST increased the likelihood that basic skills students would earn college credit and receive an occupational certificate within three years” (U.S. Department of Education Office of Vocational and Adult Education, 2012, p. 6). Similarly, the report cites Alamprese’s then emerging research that was published 2 years later (Alamprese, 2014), which found in the Oregon Pathways for Adult Basic Skills Transition to Education and Work project, “...adults participating in OPABS academically enhanced basic skills courses identify a career path, develop their basic skills, and transition to postsecondary transfer-credit courses at the same or faster rates as adults in non-OPABS courses” (U.S. Department of Education Office of Vocational and Adult Education, 2012, p.7). Finally, the report shows findings from the Illinois Adult Education Bridge Initiative of which a study by Taylor and Bragg (2012) showed positive gains in NRS skills levels.

So, the nation has come to a point where “transition to” forms a basis for how it offers basic skills for adult learners. Is that bad? After all, in expending the relatively few dollars that federal and state budgets provide for adult education, should the nation not seek to look at the most impact for those dollars? Moreover, is economic impact a serious enough need to focus those resources? The arguments suggested by these questions are compelling. Since the 1996 welfare reform act, especially, we see much of the education that is aimed at poor adults focused on jobs and employment to get these adults off public assistance and into economic self-sufficiency. If the nation gets more skilled workers and provides more opportunities for those workers, is that not the best outcome for both the adults and the society?

The issue is not that ABE focusing on “transitions to” for economic gain is bad. The conversation that

has been lost is the question of what is missing. In not interrogating this often-singular purpose, we miss other potential purposes. The evolution described above often subsumes or supplants other purposes. By the mid-1990s, ABE had matured to the point where it was exploring those potentials, as evidenced by the EFF Content Standards. What has come since is not “wrong” as much as it is incomplete. As the field has followed federal mandates to focus on employment and employment readiness outcomes, it misses opportunities to think more comprehensively about the needs of adult learners beyond their economic needs.

Scholarship of the past decade recognizes the complex causes that drive ABE learners’ progress. Becker Patterson and Paulson (2015) reviewed data released from the 2013 Programme for the International Assessment of Adult Competencies (PIAAC) Survey of Adult Skills. In looking at the PIAAC data, Becker Patterson and Paulson (2015) explored the complexity of experience and outcomes within ABE and suggested implications for “the workplace, formal and nonformal adult and continuing education, and policy makers” (p. 35). However, such complex analyses are rare as most funded studies provide evaluation of program efficacy. Rossi and Bunger (2018) studied GED students in New York State and found that despite intentions to do so, GED passers most often did not transition to post-secondary education. They concluded that, “If GED passers are not significantly more likely to enroll in college based on the usual array of demographic variables, then we should explore what actually drives this behavior” (Rossi & Bunger, 2018, p. 19). Olsen (2014) explored the needs of youth into adulthood and concluded that learning how to apprehend new forms of learning, developing non-cognitive skills, and connecting learning to pragmatic experiences make the process of learning complex for these

learners to make the transition.

Davis (2014b) concurs with Olsen’s assessment of the complexity of the youth to adult transition and further explains that finding self-agency is critical for these learners to transition educationally. Employing ethnodrama to explicate the experiences of GED students, Davis (2014a) also shows that students’ past experiences with school, their social positions within the educational system, life circumstances such as moving or pregnancy impacted their leaving school and influenced their decision to return to school. As a result, Davis argues for the inclusion of student voices in the development and implementation of adult basic education. Reynolds and Johnson (2014) suggest that the ABE classroom should be one that builds on the assets that learners bring to it by supporting four “pillars” that the authors borrow from Thompson and Cuseo: the individual, family, institution, and community. Becker (2011) suggests that learners’ limited resources combined with a lack of college knowledge create a lack of cultural capital required to transition into successful education beyond basic skills. All these scholars show that merely setting a goal for transition and measuring that goal is an inadequate approach to address the complex needs that learners bring to adult basic education.

Rubenson (2006) offers a way to look at the evolution of the purpose of basic skills through the lens he uses to look at lifelong learning. While these are separate fields of adult learning, the evolution he describes of lifelong learning is instructive. He identifies three generations, the first of which was a humanistic approach that emphasized the ways in which education could support people’s personal goals and their needs to exist within a complex society. He identifies the second generation of lifelong learning as the period that was a reaction to the

challenging economic conditions of the 1980s that saw inflation, stagnant wages, and rising unemployment. The resulting purpose of lifelong learning became focused on the economic benefits of learning (i.e., employees as human capital, learning as a tool for employment). The third generation was a “softened” version of the economic purposes in the early 2000s as lifelong learning expanded on economic purposes and allowed for social purposes that assisted learners (and thus the society) succeed in a society and economy that is knowledge based.

The parallel to what has happened over the past 30 years in ABE makes Rubenson’s description worth comparing to ABE’s progress. This comparison suggests that the evolution has happened in reaction to economic forces, and while it has softened, that focus continues to drive policy and practice. While that is understandable, adults who enroll in ABE have much more complex needs in their lives than just addressing their economic and employment needs. Whether those needs are helping these adults learn about civic engagement, learn about the often-bewildering education system that their children navigate, or learn how to manage the complexity of the current financial system, their needs are complicated.

People who teach in and manage these programs know this complexity. They are constantly adapting and developing curricula and experiences to assist the students they serve with the complexity of their lives (e.g., Ozum 2012; Rendon, 1994). However, because people engaged with the practices of ABE focus on practical applications, they rarely affect larger policy discussions. The policy makers who allocate resources and create rules that measure the efficacy of practice rarely hear from teachers and program directors; and, if they do, it is in a controlled setting where practitioners are asked to show how what they do is successful – a systemic

preservation that reinforces the status quo. Moreover, those of us involved in research often must conduct those studies for which we can find funding that is often provided by policy makers seeking to assess efficacy of what exists. By not examining the purposes for which ABE exists, and by not questioning the ways in which policies and practices are mandated, the system self-perpetuates.

A focus on transition out of basic skills is not wrong. It is important to value the economic importance of ensuring that basic skills students go beyond basic skills and find employment in family-wage jobs (Alamprese, 2005; Prince & Jenkins, 2005). There are also clear societal benefits of having basic skills learners matriculate beyond basic skills (Strawn, 2007; Baum & Payea, 2010). However, basic skills should be more than utilitarian pre-employment training. As Frerie (2013), Dewey (2012) and others have noted, education has the potential to allow learners to see the full possibilities in their lives. It cannot exist if it ignores learners’ economic needs. However, basic skills also cannot succeed if it plays a zero-sum game where “transition to” exists at the expense of other purposes. In truth, as the Oregon Pathways project suggests, it is actually by addressing the needs of learners more holistically that “transition to” becomes successful (Alamprese, 2014). This is also corroborated in other studies with other populations (e.g., adults with special needs; see: Hughes, Johnson, Taga, 2018).

ABE must mature beyond the limitations of a softer economic purpose and address the complexity of needs that learners bring. That will happen only if those who develop and implement ABE participate in developing the policies that drive their practices. That also requires that policy makers seek and listen to the practitioners and academics who explore the fully complex needs of adults in these programs.

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Technology Solutions for Adult Basic Skills Challenges

Assessing and Teaching Adult Learners' Basic and Advanced 21st Century Digital Literacy Skills

David J. Rosen, Newsome Associates

The focus of the Technology Solutions for Adult Basic Skills Challenges column begins with common challenges facing adult basic skills practitioners, expressed, for example, in the LINCS Integrating Technology group for which I am the moderator, in other LINCS groups, in my national and state conference or webinar presentations, or privately in face-to-face discussions or by phone or email. Solutions to these problems, at least in part through the use of technology, include: hardware such as desktop and laptop computers, smartphones, electronic tablets, VR Goggles, and electronic whiteboards; and digital software applications such as websites, course management systems, learning management systems, databases, and apps for mobile devices. Each article begins with a challenge and examines one or more possible technology solutions.

In the technology solutions column of this special issue of Adult Literacy Education, that focuses on Broadening the Lens on Adult Literacy Education Outcomes, I want to challenge our field to expand our view of digital literacy. Of course, basic digital literacy skills must be included, but we have to look beyond to the digital skills and attitudes adults need in order to research their questions; judge the

quality of information they have found; and to solve problems at home, work and in their community that require or can benefit from the use of digital skills, comfort, confidence and fluency. These define the digital literacy capacity adults need to solve new problems facing us in a changing society, including the new problems created by ever-changing technology itself.

As adult basic skills researcher, practitioner and administrator Dr. Jen Vanek put it in a January, 2017 PIAAC Commissioned paper, "Using the PIAAC Framework for Problem Solving in Technology-Rich Environments to Guide Instruction: An Introduction for Adult Educators." <https://bit.ly/2tKVSgf>

The increasing complexity and number of technology tools in our communities has altered the nature of work, schooling, and daily life. This, and the attendant increased complexity in tasks and problem solving, positions learners (as well as teachers!) as life-long learners. To truly prepare learners to succeed outside the classroom, we need to teach more than academic content. Our instruction must also help learners develop the resilience they need to address future changes. By building a learner's ability to employ the problem-solving process, we can support their continued learning in a dynamic world.

Description of the Challenge

Basic and advanced digital literacy and problem-solving skills are needed for success in postsecondary education, career pathways, work, and daily living and learning throughout our lives, but how can adult basic skills (including ESOL/ESL) programs and schools assess and teach these skills?

Basic and advanced adult basic and more advanced digital literacy skills are primarily defined by these three different sets of standards:

1. **The Northstar Digital Literacy Assessment Standards for Essential Computer Skills** (basic digital literacy skills) https://assets.digitalliteracyassessment.org/static/main_website/docs/NDLA-standards-2018-11-18.pdf
2. **International Standards for Technology Education (ISTE) Standards for Students** <https://www.iste.org/standards/for-students> that include these seven more advanced digital literacy areas: Empowered Learner, Digital Citizen, Knowledge Constructor, Innovative Designer, Computational Thinker, Creative Communicator, and Global Collaborator. Although designed primarily for K-12 learners, these are increasingly also used in adult basic skills education especially for more advanced digital literacy skills.
3. **PIAAC PSTRE Conceptual Framework** https://read.oecd-ilibrary.org/education/piaac-problem-solving-in-technology-rich-environments-a-conceptual-framework_220262483674#page20 and Using the “PIAAC Framework for Problem Solving in Technology-Rich Environments to Guide Instruction: An Introduction for Adult Educators.” <https://bit.ly/2tKVSgf>

Possible Solutions

For assessing basic digital literacy skills, these assessment tools for adult basic skills learners may be of interest:

1. **Northstar Digital Literacy Assessment** <https://www.digitalliteracyassessment.org/> This includes free individual and subscription-based testing program versions. The subscription version offers an aligned online digital literacy curriculum, assessment training and the ability to award those who pass the assessment modules a certificate. Both versions are free to learners taking the assessments.
2. **Total TekAssess** This is a proprietary computer and Microsoft Office skills assessment. <https://www.teknimedia.com/html/digital-skills-assessment.html>
3. **Microsoft digital literacy assessment** (free) <https://www.microsoft.com/en-us/digitalliteracy/assessment/instructions.aspx?lang=eng&aid=as26b>

For assessing more advanced digital literacy skills:

1. One possible resource for measuring student progress is the PIAAC-based PS-TRE assessment Education and Skills Online (ESO). <https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/52276bd2e4b0ae4ae05ae899/1378315218944/Education+and+Skills+Online.pdf>
2. Another more advanced digital literacy assessment may be the Learning.com digital literacy assessments that received the ISTE Seal of Alignment for Readiness (see below for more information on the Seals of Alignment.) “Learning.com’s two Digital Literacy

Assessment resources are designed to assess student skills across all ISTE Standards for Students at the fifth and eighth grade levels. The assessments are accessed and completed online using a customized testing interface on the Learning.com website, and each assessment is created at a level appropriate for the target audience. The assessments use technology-enhanced questions that meet Web Content Accessibility Guidelines and are responsive for use across devices. Practice tests, real-time data and teacher resources are also integrated into this resource.”

Seal of Alignment Review “The Learning.com Digital Literacy Assessments successfully underwent the International Society for Technology in Education (ISTE) Seal of Alignment review for Readiness. Reviewers determined this resource helps build foundational technology skills needed to support the ISTE Standards for Students.” <https://www.iste.org/standards/seal-of-alignment/digital-literacy-assessment>

For providing digital literacy instruction:

1. The Northstar Digital Literacy Assessment subscription option provides access to a basic level adult digital literacy curriculum aligned to the Northstar Digital Literacy assessment <https://www.digitalliteracyassessment.org/>

[news/2019/09/curricula-release-and-other-updates](https://www.digitalliteracyassessment.org/news/2019/09/curricula-release-and-other-updates). Note that a free selection of curated web-based learning resources is available at <https://www.digitalliteracyassessment.org/external-resources> These resources were not created by Northstar, but have been carefully selected by their staff for alignment to the Northstar assessment.

2. Three resources that align with the ISTE standards and have received the ISTE seals of alignment (<https://www.iste.org/standards/seal-of-alignment>) include:
 - a. **Google/Applied Digital Skills** <https://www.iste.org/standards/seal-of-alignment/google-applied-digital-skills> and <https://applieddigitalskills.withgoogle.com/s/en/home>
 - b. **21 things (for teachers)** <https://id.iste.org/docs/soa/21things4teachers-findingsreport-final.pdf?sfvrsn=2> and <http://www.21things4teachers.net/21-Things/index.html>
 - c. **Teq Online Professional development integrating technology courses** (now called OTIS) https://id.iste.org/docs/soa/findingsreportiste-teqopd_final.pdf?sfvrsn=2 and <https://otis.teq.com/courses/category/id/20/events/Blended-Learning>

Reflections

There are no ideal solutions, at least not yet, for assessing and teaching advanced adult digital literacy skills. However, there may be some significant potential in the years ahead as technology problem-solving simulations are developed, perhaps made more robust with artificial intelligence and virtual reality applications, and as new formative and summative assessments are developed for the more complicated and contextualized problem-solving tasks that benefit from the use of digital technology.



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